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Current Notes

Vol. 10, No. 5 June 1990

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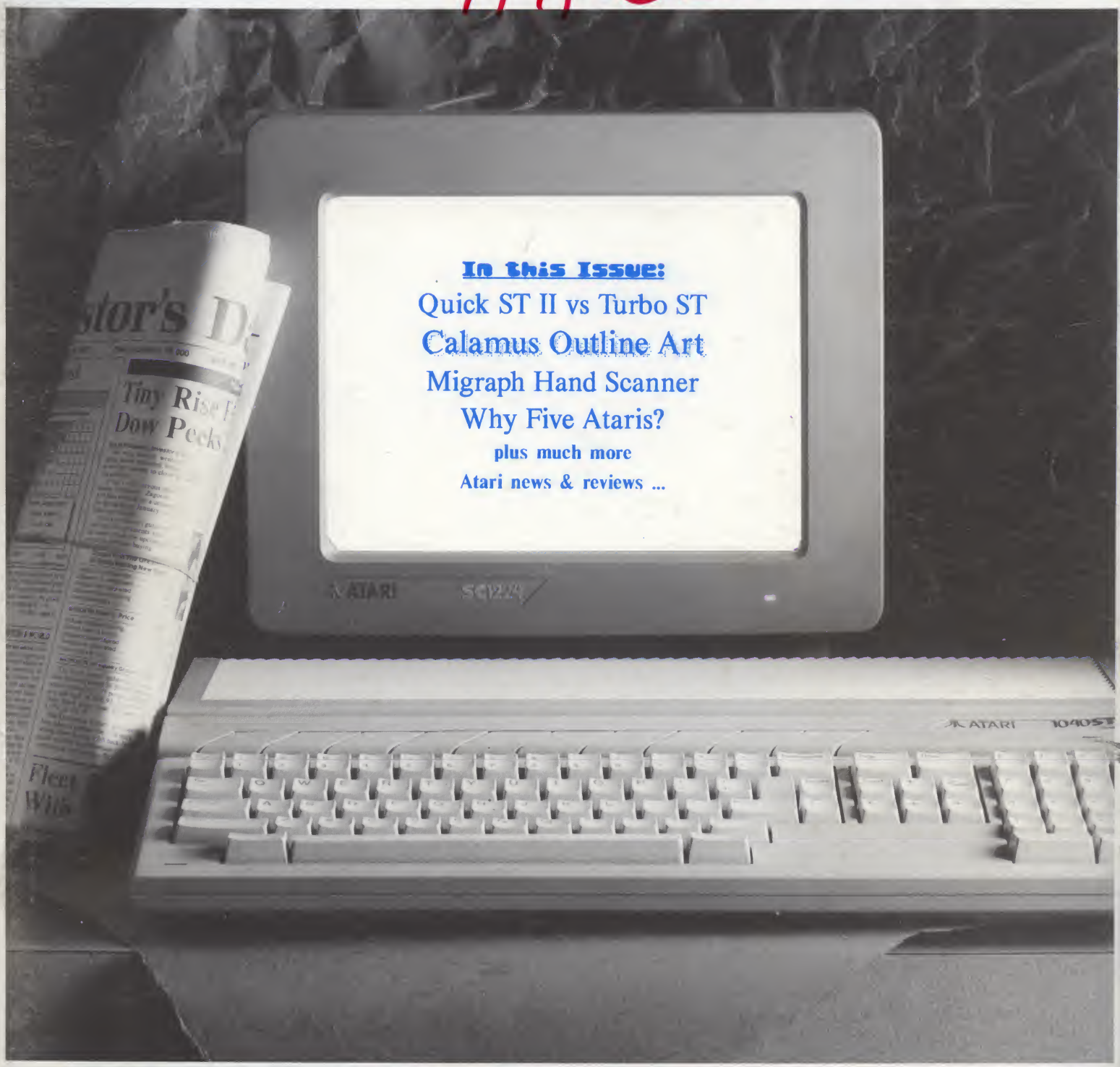

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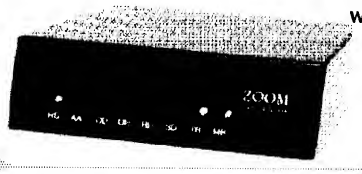

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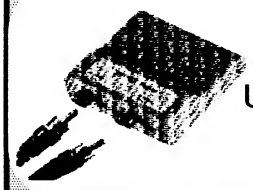

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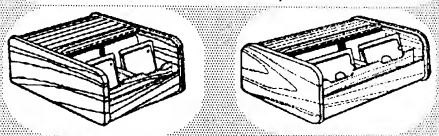

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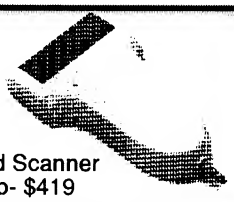

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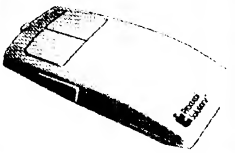

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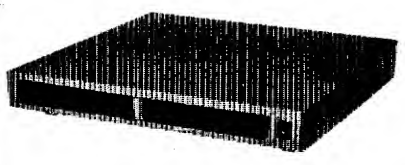

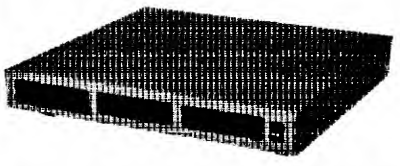

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KEY:

- ❑ ST-related review or article.
- ■ XE/XL related review or article.
- • Machine independent article.

From the Editor's Desk:

But My Machine Is Still Good!

I recently had a call from an unhappy owner of an Atari 8-bit computer. He was upset because Atari was no longer going to produce the 8-bit Atari; they were abandoning the owners of Atari 400s, 800s, and 130XEs. Representatives of Atari explained that it was no longer cost effect to manufacture the 8-bit since it was just about as expensive as the more powerful 16-bit systems. My caller found no solace in this argument. His machine was still a perfectly fine computer! Why wouldn't Atari support it?

It's true that the computers in the Atari 8-bit line are perfectly fine computers. In this issue, Ben Poehland tells us how he keeps five Atari 800XLs productive. But, it is also true that the Atari 8-bit line is obsolete.

Isn't this a contradiction? How can a computer be productive and be obsolete? Well, it depends on what you are doing with your computer and whether you already own a computer. Clearly, if you are considering the purchase of a computer, you want to get all the power you can for the money you expend. It really doesn't make any sense to buy an 8-bit computer when you can have one 10 times more powerful for about the same price.

But what if you already own an 8-bit? Because new 8-bits cost as much as 16-bit computers, should you discard your current machine and run out and buy a new one? Many people would say, "Definitely not!" However, I suggest the answer is "Maybe not." It depends on what you use your Atari for.

Many users who frequent the world of telecommunications, and spend a good deal of the family budget on phone charges, can easily grasp the significance of moving from a 300 baud modem to 2400 baud. Not too many years ago, a Hayes 300 baud modem cost $500. Today, 2400 baud modems can be had for about a fifth of that price. When you call up a national online service, you are charged by the minute. If you are downloading files using a 300 baud modem, you can be on that line for many, many minutes. Switching to a 2400 baud modem cuts your connect time, and thus your costs, down drastically. For some users, the purchase of a 2400 baud modem will save enough money to pay for the modem and then some. In a case like this, even though the 300 baud modem is free (you already own it) and it continues to function perfectly like it always did, it doesn't make economic sense to use it.

The same logic can be applied to using your 8-bit Atari. If you are using it in a business where time is money and a new computer can help you get your work done significantly faster, it pays to discard your old machine and buy the new one. If, however, all you do with your computer is draft an occassional letter, the 8-bit can handle that task perfectly well.

Of course, using a computer as a tool is very different than using it as an entertainment medium. Tools last a long time. A hammer pounds nails. Once you own one, you can pound nails for many years. A computer can be used to write letters. Once you own a computer and appropriate word processing software, you can write letters for many years. But entertainment, like going to the movies, requires new features to remain satisfying. There have been a large number of terrific games written for the Atari 8-bit line, but there simply aren't going to be many more written in the future. Even if you only have some of the many games written, it is unlikely you will be able to find these older games on the market. It is difficult to find stores that even carry software for the 8-bit line. This is another sign of a computer becoming obsolete. The hardware works just fine, but nobody is producing new software to work with that hardware and a computer, after all, doesn't do anything without software.

My caller made the observation that ST owners should not feel so complacent about their machines because they are going to be in the same boat as the 8-bitters very shortly. He was certainly right about that. Just as the 8-bit line has aged and is no longer economical, so too will the ST and Mega lines grow obsolete. And it won't take that many years to happen either.

We are not unique here. The IBM PC and the PC XT are just as obsolete as the Atari 800XL and they are more powerful machines! True enough, lots of XTs are out there and clones are still selling, but the standard entry-level machine today is a 32-bit system (80386 chip) with a hard drive and high-resolution color graphics. The biggest competition for Atari is coming from this continuing evolution of computer technology. Discount stores, like "The Price Club," are selling high-end PC clones for between $1,000 and $2,000 depending on what size drive or other options are chosen. These systems are fast and more colorful than our STs. If a decent user interface, perhaps Windows 386, is added, one would have to wonder what advantage the ST or Mega would have.

Atari has not been keeping up with the competition. If we do not get a significant technological leap in Atari capabilities, or a significant drop in the cost of Atari ST and Mega computers, the days of that line are numbered just as surely as are the days of the 800s. And Atari can't wait forever either. It must be in 1990 or Atari Corp. will completely fade out of the US market.

Jon Walters

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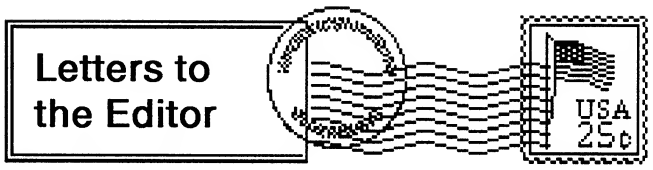

Some Ideas for Improving ST Systems

Dear Editor

If I weren't sending in an order for disks from the CN Library, this letter probably wouldn't be written. Here are some ideas for improving ST systems or the marketability of these systems. I'm a lawyer not an engineer and I have no time to develop products, so I hereby waive all claim of rights or ownership in all of the following ideas (not that they're worth anything anyway; talk is cheap; it's development work that deserves to be compensated).

1. Supercharger Needs TOS Disk Caching Software

When it is not being used as an MS-DOS PC emulator, could the Talon Industries Supercharger be used as a caching disk controller for a hard disk farther down the DMA port chain? For example, if I have a 30 megabyte drive with a seek time slower than 60 milliseconds (such as a Megafile 30), then I could really use a disk cache. Instead of operating with a slow 30-meg drive, TOS could operate with what appeared to be a 31-Meg drive, which was very fast in approximately 890 percent of its searches for data. The NEC V-30 in the Supercharger could manage the caching algorithm, attempting to predict what data the application program would need next. By transferring this information from the slow hard disk to the cache, the cache controller would make the information much more quickly accessible. I've heard the Supercharger can act as a RAMdisk under TOS, but can it function as a caching disk controller and cache?

2. The Twin Gun Full Page Mono Monitor (with no shadow mask).

One of Atari's niches is in kitchen-table publishing ("kitchen-table" rather than "desktop" because the Atari approach is so inexpensive that you can publish at home, not merely at your desk at work). It would be very helpful to have a full-page monitor, but most kitchen table publishers can't afford a Moniterm. Besides, you need a Mega to run a Moniterm. So here's a low-cost alternative: a 640x800 monochrome monitor. A Taxan 1280x800 monitor can show two full pages side-by-side, so a 640 (horizontal) x 800 (vertical) monitor should be able to show one full page.

This is an industrial project, not merely a hardware project. The reason that an industrial approach is necessary is that this monitor would need two electron guns to produce any useful picture with a stock Atari ST. The data transfer rate of the ST video output won't allow an increase in the scanning rate of the monitor. In order to reproduce the current ST video output on a full page screen, for example, a single electron gun would need to produce a very thick electron beam to cover a full page-height of vertical deflection at the ST scan rate without leaving horizontal lines on the display. The consequences of the thick electron beam would be a loss of horizontal resolution due to overlap. Besides, a single gun would be limited to 640x400 unless its sweep speed increased. It could never be usable with the present ST but upgradeable in the future.

A full page monitor with two parallel electron guns, arranged one above the other, would cover the monitor screen with narrow beams, so horizontal resolution would not be sacrificed for large vertical deflection. Vertical resolution would be 640x800 if the guns were independently driven. If they were driven by identical signals (that is, if the ST's high-resolution output signal were fed to both guns with no time offset) then the actual resolution would be only 640x400 but small fonts would be more readable. As an example of the readability of fonts, imagine Uniterm V2.0 in 50-line mode on a full-page monitor, but with the same font size and readability of First Word in medium resolution mode. As another example, imagine a screen that consists of two medium resolution 640x200 First Word screens, joined one above the other. So this monitor would be useful to owners of unmodified STs. Looking at the screen fonts in use on 640x200 screens has persuaded me that desktop publishing software developers could adapt their software to show significantly more information on the screen of a full-page twin-gun monitor, even with a stock ST driving the monitor at only 640x400.

Eventually, Atari or someone might modify the ST or the BIOS so the computer could send distinctive signals to each gun. This would allow true 640x800 resolution.

Regardless of whether each beam was being fed the same signal or different signals, each beam would be deflected up and down the entire height of the full-page screen (actually, it would be almost the entire height; one beam would stop one scan-line short of the top of the screen and the other beam would stop one scan-line away from the bottom of the screen.) The two beams would cross the screen side-by-side, striking parallel lines of phosphors on the screen. The use of two beams would allow the beams to move relatively slowly without necessitating the use of long persistence phosphors.

If a color CRT tube were rotated 90° around its long axis (that is, tipped onto its side) and if the shadow mask were removed and if the color phosphors were removed and the screen was recoated by phosphors for monochrome, and the signal from the vertical deflection amplifier were rerouted to the (former) horizontal deflection plates and the signal from the horizontal deflection amplifier were rerouted to the former vertical deflection plates, and if two of the three electron guns were used, you'd have a two-gun page-high monochrome monitor. Now you see why this is an industrial project. Not even Steve Ciarcia would attempt this one.

Thanks for letting me get these ideas out of my system, as I sit in the car in the rain without a computer,

William L. Lynch
Seattle, WA

Some Comments from Alaska

Current Notes;

Here I am again with subscription enclosed.

As usual, when I receive a copy of your publication, I read every word from end-to-end, and, yes, the ads too! Since I do not have a users group in my area, publications such as yours are my only resource for ideas and information.

I also read the MS-DOS and Apple publications. Although not as interesting as ST publications, it gets me to wondering if staying with the ST is a wise choice in light of the poor support. So, why do I stay with the ST? 1) I don't have time to switch and re-tool my computing life, 2) I've invested plenty of money in my system and won't use it as an expensive door-stop, 3) It's easy to use, and fills all my computing needs, 4) The ST world has honest down-to-earth supporters like your publication and the programmers that turn the screw for every last drop of productivity -- Thanks, I've learned plenty and get more for my money through those efforts.

At risk of beating a dead horse: I have written to Atari USA and encourage all readers to do the same. We have nothing to lose and everything to gain if we can get more STs in the homes and schools of America!

I'd like to add an "amen" and a few other observations to Greg Csullog's "How to Improve Your ST..." from the April issue. He is absolutely correct about the UIS and NeoDesk. Since using those programs along with TurboST, Pinhead and G+Plus on my old TOS 1.0 1040ST with a 50-meg hard drive, it's like owning a new computer. If you're bored with your ST, do yourself a big favor and buy a hard drive and get these programs. If you do buy a hard drive, I highly recommend D&P hard drives. It's hard enough buying through the mails and a bigger hassle from Alaska, but not only did they deliver quality, but the price beat all the others hands down! Thanks D&P.

One last note, If there are any ST owners on the Kenai Peninsula in Alaska, please contact me so that we can start a users group. If anyone wishes to help me start a users group, I'd appreciate sample newsletters or other advice.

Richard Sitbon
1112 Second St
Kenai, AK 99611-7210
(907) 283-5837

pc ditto II: Up and Running

Dear Sir:

I have been following the pc ditto II saga closely, as I was one who ordered the board when the first announcement came to the owners of the software version.

I am happy to report that I have mine up and running as of about a month and a half ago. A thorough test has not been run, due to lack of time, but quick runs of Word Perfect 5.0, Plan Perfect, and Data Perfect seem to work fine. Plan Perfect and Data Perfect are not the current versions. They are "borrowed" just so I can learn more about the MS-DOS world. I have one at work that I use intermittently, but would not trade my Atari for one.

My installation is in a 1040 STF. The board is outside the RF shield, and is crammed inside the case. It causes a small bulge in the case, but livable with, but not something you would want to recommend to someone if you are trying to get them to buy one for so that person has IBM capability. It simply does not look good. I had to write two letters to Avant-Garde before it was running. Both responses were prompt, with each letter containing printed addendums of installation instructions. That indicated to me that they were working on the problem. I was fortunate enough not to need the new chips on the board. I did follow their recommendation about carefully soldering the connector clip to the 68000 chip. Personally, I would question the capability of any clip to stay attached using solely a friction fit. The instructions also called for an additional piece of insulating paper between the board and the keyboard. I also had to add a piece between the board and the RF shield. Apparently, the sponge rubber insulating material supplied was not thick enough to prevent contact with the shield when the cover was installed.

I guess one has to give some of the "blame" to Atari, since they apparently have built a plethora of machines with differing internal designs and have not been very helpful with information with anyone outside the company.

I think I may have purchased my last Atari computer. I started out with an old Atari 800 with the CTIA chip. I still have it. In addition to the 1040, I own a Mega 4, and a couple hard drives. I know I have a machine that can blow away the competition hands down when the dollars are factored into the equation. I have sat here and talked myself blue in the face, shown off the machines advantages when compared to IBM, even pointing out that the fact that the MS-DOS world is going to mice and graphical interfaces. It is surely frustrating.

I don't think it will matter how good the STacy is, whether the ST^e really is much of an improvement, or how powerful the TT will be. I think as long as Atari does not pursue a reasonable and businesslike course to selling their products in the US, they should just move their headquarters to Europe, where the action apparently is. A US corporation should at least support their product in the US, and not merely operate a set of revolving doors at the office.

I thank you for your time. I have been a subscriber for some time now, and will continue.

Ken Springer
Bettles, AK

He'll Keep pc ditto II

Dear CN,

Enclosed is my check for $24, please enter my subscription to CN. I recently picked up your March 1990 issue, after not seeing CN for over a year and I was impressed by the look and professionalism. Many ST

publications have gone by the wayside, in my opinion, more due to their amateurish production, than due to the continuing problems of Atari support in the US. I'm glad to see that you are thriving.

I would like to comment to Milt Creighton on the pc ditto II. I, also, put my money down without question last September, based on the reputation of pc ditto. Similar to Milt, I also received the same setup after five months; a board much too big to fit into my 520ST, and a system that locked up at DOS. Avant-Garde replaced my PAL's in a timely manner, but it still took me many frustrating hours to get the 68000 connector exactly right before the unit worked. I almost gave up on it several times. After all, who really needs to have this circuit board sitting behind my 520ST, cables exiting through a hole that I cut above the printer connector?

Well, I finally got the pc ditto II board working and have decided that I can stand my monitor picture shifting when I use it, so I have kept the unit. It actually tests out at 4.2 on the Norton rating scale. I do wish that A-G would have made the board and cables so that they would fit inside my ST however. The applications that crawled on pc ditto now run extremely fast, and several applications that I would not run due to speed I can now run on pc ditto II.

Bob DeFrancesco
Phoenix, AZ

Thanks for the TeX Distribution

Dear CN Editor,

I want to congratulate Current Notes, the Current Notes ST Library, and all of the authors involved in the TeX Distribution (#395D-#399D) System. TeX is the preeminent math and scientific document preparation system, which was developed by Donald E. Knuth at Stanford. It is available on most computers but typically costs a few hundred dollars with drivers.

I wanted the capability of printing greek and math characters in order to create an equation summary for my physics class. I was surprised to find that such a complete set of GDOS fonts was not available. I attempted to convert some Degas fonts using Fontz but found this to be slow and the results were not very pleasing.

About this time, Horace Mitchell's article on "TeX on the Atari ST" appeared in Current Notes (Dec 89). I learned that a monochrome monitor was not necessary to run TeX and that a driver was available for the HP Deskjet printer. I sent for the entire system and installed TeX, Metafont, LaTeX, and a minimum font package on my hard disk. By installing fonts only when necessary rather than all fonts, I am able to get by using only a couple of Megabytes of disk space. I have been very impressed with the completeness of the system. For instance, there are test files to check if the installation is successful. All of the macro packages are included. The system seems to be completely compatible with the TeX installation on our VAX 3600 at work. I can work on and print files either at work or at home. The fonts are very clear on my Deskjet and are essentially identical to those on the laser printer at the university.

Although TeX is probably not the easiest system to use for document preparation, it is very powerful. I am very pleased with the Current Notes distribution.

Frederick A. Harris
Kailua, HI

Random Thoughts of an Atari User

Dear CN,

In the spring of 1986 I decided I wanted a personal computer, not because I really needed one, but because the very idea of "computing" was intriguing. I had never used a PC and didn't know anything about them ... obviously some research was in order. Fortunately, none of my friends had a computer and could prejudice me in favor of the then popular "Leading Edge" or Commodore 128. After looking in a few magazines, my wife and I became aware of the new "Atari ST." The magazines gave it high marks: it was described as user friendly, had a mouse, a whole half meg of RAM and, significantly, a (relatively) low price. Atari-specific magazines were unknown to us, and we didn't know user groups existed. My wife made a long distance call to Atari, and the latter provided the name of the nearest dealer (fortunately, the Washington, D.C. area was, and still is, a relative Atari stronghold). We bought a 520 ST, color monitor, and (unfortunately) an SMM804 printer.

So we became, like many others, loyal Atarians. The ST is a great computer and if we can fault Atari Corporation for a self destructive marketing and distribution policy, we have to be thankful for the great little computers that have entertained, educated, increased our productivity and allowed us to develop a hands on appreciation of a technology that was out of reach not too many years ago. Thanks also to the programmers, distributors, and writers who continue to support the ST.

Reading histories of the "ancient" personal computers, ALTAIRs and SOLs, etc., it is amazing how recent those days were. In those dark ages you had to teach yourself a lot, learn programming, pioneer new territory. By the time the ST became available, things were different and the non-programmers (like us) could make good use of their computer without having the slightest idea of what was going on under the hood.

Every ST user has shown off his or her ST to an IBM "power user" ... even now, despite their faster microprocessors, enhanced graphics, and other expensive add-ons, IBM aficionados are amazed at the ST's power, interface, and utility. But at least the IBM-nics are interested--most Mac users can't conceptually comprehend they don't have the one and only true righteous machine (anything else is not worthy of discussion or further investigation). They can't deal with a computer system with cables running all over the place (like our ST).

Well, I'm sure my wife has regretted that phone call over the years. That first 520 has grown into a system which includes another ST (1040), various disk drives, modem, Supra 30 MEG hard drive, monochrome monitor, Spectre GCR, etc., not to mention a few $K in software ...

and now the Portfolio, actually my wife's, which I'm using to record these thoughts.

We must have had the ST a few months before we discovered Current Notes at a local bookstore. We also began to subscribe to Compute's ST and STart. The latter two were OK but didn't do much to help the neophyte ST user. CN, ST Informer, and eventually STart, have been interesting and informative. Anyway, like many others, it took some time to figure things out ... loading accessories from a boot disk, changing file names, data disks ... but learning and finally figuring out how something was done was the fun and challenge of being an ST user.

I'm sure that if we had started out with a PC clone, interest would have waned. But how could one get bored with *DEGAS, Maps and Legends, Silent Service, Wordwriter ST, Carrier Command, pc ditto, SPECTRUM, PHASAR, Dungeonmaster,* and many others (insert your favorites), not forgetting the many, many PD and shareware disks.

The ST. What could have become the computer of the masses has been enjoyed only by a relatively small number of us. Without Atari, Apple, and Commodore, there really would be only one standard, i.e., IBM, and that would be unfortunate.

Last year I finished playing FTL's masterpiece for the ST, *Dungeonmaster* (DM). Like other "adventure" games, I think DM has intrinsic educational value. Have there been any studies on the value of playing this type of game as an educational tool? These games, first of all, are fun. They enter into, "interact," and stimulate the imagination. Sometime ago I recall reading an article about the positive role of creative imagination in child development. Computers, as we know, are powerful and, generally, creative tools.

Someone once said that a liberal college education really didn't teach facts (at least that can be remembered ten years later or for that matter ten minutes after the final exam). The value, they said, was to learn how to organize and express thoughts, approach problems, research and develop answers, and learn to discipline oneself intellectually. Besides, they said, in college you can have fun and escape from the real world for a few years. DM accomplishes the same thing! (Well, OK, at least to a point!)

The gamer is faced with obstacles that only imagination and the application of problem solving techniques will resolve (OK, frequent saves help!). Eventually, if one sticks to it, friction (thank you Clausewitz) is overcome, the puzzle which the programmer has created is solved, and the game is won. The question is, isn't struggling to solve, for example, DM, a valuable educational experience? Role playing, going places we may never get to see (an F16, WWII Fleet sub, Lefty's Lounge, and hundreds of other places in and out of "this world") requires the application of problem solving techniques, under pressure, i.e., an "adventure"--a hazardous enterprise (even though the pressure and danger are imaginary).

Dave Small (Gadgets by Small) deserves praise for the Mac emulators, his eclectic contributions to ST publications, and overall contribution to "our community." Now Gadgets is offering a military discount, an outstanding gesture.

Before we even think about a TT, we are going to get an "old" 8-bit and learn what Atari computing is really about!

Regards from Lima, Peru (where a voltage regulator is a lot more important than a second disk drive)!

Robert & Pam Underwood
American Embassy Lima
APO Miami, FL 34031

Thanks to CN and Alex

Dear Mr. Waters,

Thank you ever so much for remembering me and my situation, and for printing my letter in your magazine. You'll never know how happy and surprised I was to receive your call telling me that someone had responded to my request for a hard drive. Why, I hadn't even gotten my May issue of *Current Notes*!

My deepest appreciation and thanks go out to Alex Barber and his father Mr. Jonathan Barber, of Vienna, VA., whom, without hesitation answered my call for help. Alex has recently arrived home for summer vacation from school in Texas, he saw my letter, and contacted you. His generosity and concern for others will go a long ways in helping me in my endeavors to improve the present conditions of my community, and he went to great lengths to insure that my acquiring the drive would not strain my finances. Alex, THANK YOU for helping to make a difference! Good luck to you and your studies!

And thank you again Mr. Waters, for your valuable insight and support in this matter, and for the great job you're doing with *Current Notes* magazine. As I busy myself in preparation of the task ahead, I will remember to keep you informed of my progress.

Jim Dupree
Baltimore, MD

Time to Renew?

Unlike many commercial magazines, CN does not start sending out renewal notices two months after your subscription starts and we don't pester you with notice after notice. We only send out one reminder and that just before your subscription expires. However, we do try and warn readers when the end date is approaching. Look at your mailing label. If it says "9006<-RENEW NOW." this means that your subscription ends in the sixth month of 1990 (June) and that this is your last issue. You will also see a renewal reminder if your subscription ends in July, August, or September (9007, 9008, or 9009).. It certainly helps us if you can renew early so we do not have to send out a renewal notice. You can even renew by calling in with your VISA or MC number (703) 450-4761. Don't wait. Renew now!

Smiling Stockholders But Cloudy Skies, Lower Prices, Model Problems, and Great Entertainment Software

16 Megahertz Meeting

It was 2 p.m. and the 1990 Atari stockholders' meeting was open for business. It was 2:05 p.m, and the official Atari stockholders meeting was over. Last year it had taken 60 minutes. But lotsa things besides computers are faster these days. After approving the current slate of officers and the auditors, what else was to be done?

The meeting closed and Sam Tramiel, looking very presidential, opened the informal session for questions and conversation. It was described as an upbeat atmosphere. Half the stock holders appeared to be employees and the rest were from the local area. Not a negative word about the company was heard. There, under glass, was a Lynx, and Sam noted Atari hoped to sell 400,000 of them this year. Also, there would be several new versions of the Portfolio. Atari had signed with a software developer who would be bringing out 30 new titles for the big "P," and Atari itself was ready, as Sam spoke, to release 12 new programs on 3 disks.

The good news was like a monsoon breeze. The TT would be ready to ship in 30 days; it was going to the FCC before the end of May. It would be a formidable competitor to the Amiga and the Apple 32-bit machines with 10 meg of video RAM and run on nibble-bit RAM, making it much faster than the average 16 MHz machine. Atari was "very interested" in the U.S. market and planned "a big roll in" with the introduction of the TT. The ST^e's would be out by the Ist of June. As noted, it was a very positive meeting, which the head of Atari ran with what was described as "consumate executive skill." Even skeptics hoped this might be the harbinger of a "turn around" for the company in this country.

When It Rains It Pours

Back on the streets. This was the month that we hoped, and many predicted, the sun would rise and shine on the Atari parade. The STacy's would be here. The ST^e's would begin to show up along with eye-blinding new software programs to allow them to strut their stuff. The Portfolio's would bulge from 100's of thousands of breast pockets. The Lynx would be in full production and Game Boy would be taking the beating it deserved. That was just the beginning because third-party products would also be trucking on down. All that stuff, that good stuff, would be coming on line and on shelf. *FleetStreet Publisher 3.0, Word UP 3.0, Calamus Outline*, and more and more Moniterms would have been sold to permit Mega ST owners to dazzle the onlooker, while Mega 44 cartridge drives hummed as sprightly graphics flowed from disk to screen. Sharp was coming out this fall with a color scanner for the Mega's and the TT that would do 256 colors, cost $1,000, and require six megs of memory for a full page, but easily do three quarters of one on a Mega ST4. The sun wouldn't just shine; it was going to be 4th of July in May. And everything at the stockholders' meeting confirmed this.

What happened? Chats with dealers on both coasts, dealers who had not heard of the stockholders' meeting, but who have been creatively and vigorously pushing the Atari and its products for half a decade, blacked out the sun, and brought on the rain. While generally extolling the new additions, the BCB troika of Bill Crouch, Charles Cherry, and Bob Brody, the question most common was, "What is the management trying to do to Atari in America?" This was followed by descriptions of conversations with Atari, estimates of product arrival, and frustration, anger, dismay and disbelief that a company could so consistently and repeatedly miscue with products that essentially were of a high order.

Item: "Everybody knows that people buy what they see in the malls and on TV. You don't see Atari in either venue. There is no advertising, no continuous promotion, and the product is consistently too little and too late. I've been convincing people for five years that this is the best computer out there. Now, they're shaking their heads and exchanging their machines for Macs, Amiga's, or clones or just putting them in the closet."

Item: Atari sold the Portfolio directly, initially, cutting out the dealers to skim the cream. The warranty was in effect, "*Satisfaction guaranteed. If not return it for a full refund.*" Estimates now range anywhere from 30-50%

for the number of those Portfolio's returned. Sales are flat, and while dealers can receive a margin of profit equal to that of selling a 1040 ST, they're just not selling. Like a hot computer game, the rush is past.

Item: The ST^e that caused the stir in Florida, the one imported from Canada in order to do just that--cause a stir--well, that "star blazer" stopped when connected to a hard drive. A quick call to Canada produced the news that eight out of ten ST^e's don't work with a hard drive; a problem with the DMA chip that causes the machine to stop after 30 minutes. That's awkward if you buy the machine in Canada and take it to Brazil to dazzle your friends! Dealers have heard from Atari that the May appearance of the ST^e will be delayed due to "tooling up problems."

Item: Navarone, who puts out the top-of-the-line scanner for the ST, has discontinued all development of Atari products; it will still sell existing stock, but no optical character reader will flow from them. Navarone sells the ST flat bed scanner for circa $1,850; now they will be selling one with an IBM interface for $1,100. Similarly, Timeworks had discontinued all support for *Word Writer ST*.

Item: In the words of one dealer, "The Lynx is dead. No margin for the dealer; no software for the user. Two new programs since it was released last Xmas. Game Boy is flooded with new titles, more and more each month. So, again, a better machine bites the dust. Too little and too late." (Current owners doubt this comment. They can't believe a machine so vastly superior will be overtaken by a second-rater. When you confront dealers with this, their response is simply, "Advertising?")

Item: To solve their problems Atari has completed the firing of 22% of their sales force. However, there is little evidence that lack of sales was the exclusive fault of the sales force. They've also closed out half their warehouse space.

Item: Rumors from within Atari are that the TT will appear this summer; but dealers beware. Atari considers this to be primarily a European product and does not intend to give it heavy support in the U.S. (While the FCC may get its first look at the TT before your read this, the earliest we would expect to see it ready for sale would be October.)

To understate it, the veteran dealers who have been loyal to Atari to date, and are still in business, are a discouraged group. What would change this attitude? Evidence, acts, not rhetoric, that Atari was changing its niggardly U.S. ways, that it planned to market aggressively, with national advertising and full support of the products. It's a valiant game the threesome, BCB, responsible for developers, dealers and user groups, are playing. They still have the respect of their constituents. It would seem that it's time for the top management of Atari to step in and actually do what Sam was telling the stockholders they intended to do.

Prices

Atari has realized that it needs to move some of its products to make room for new issue. When you have no advertising to attract attention, word-of-mouth news about "sales" and mass merchandizing is an alternative, admittedly a second-best one. Atari's **Adventure Power Pack** was announced last month. It is expected to hit stores in June and will feature an ST with 12 pieces of software for $399.

You can now buy a Mega ST4 for about $180 more than a Mega ST2, or $1,400 in California. SLM804 laser printers, in our humble opinion, one of Atari's finest and least-touted products, are now listed at $1,195 but actually selling for $750 and $850 with PostScript. With the dramatic drop in the cost of memory chips, a dealer can now take a 520 ST and turn it into a one meg 1040 ST and sell it for $399 to $449.

Entertainment

We have a suspicion that a great chunk of the devotion to the Atari machines is generated by the pleasure they bring us when were just sitting in front of them "entertaining" ourselves. Though we don't play adventure games (every program is an adventure if you have a phobia about documentation), not a day passes without a ritual stop at two or three of our favorites. U.S. developers may be shying away from producing new games for the ST's, but Europe makes up for it. The summer harvest will bring you some super sport and fun. Greg Norman's *Ultimate Golf*, known to some of you as *Shark Attack*, will keep you on the links late into the night. Simulations abound. Top sellers will include *Fighter Bomber* and *F-29 Retaliator*. *Chess Player 2150*, *Interfer*, and *Emotion* are apparently also winners. Prize for the worst title to date probably goes to *Impossamole*. *Mid-Winter*, a compelling strategy game, is causing several of our authors problems with deadlines. Some of you already know *Dragon's Breath*, but don't miss *Conqueror*, *Fire Brigade*, or *War Head*. For vacation travel with your Lynx, *Gauntlet* is just out. ST Game of the year in Europe? *Squeak*.

On the Wane?

The season is barely underway and already the name "Pittsburgh Pirates" is attracting attention, or at least it was at the Pittsburgh Atari Computer Enthusiasts show in early May. In addition to having a beautiful day, which drove people outdoors and not inside, thereby rendering a miserable "head count," the developer/vendors were unhappy about the low volume of sales. "Miserable attendance," in the sense, that the first question asked when people talk of an abortion rally or an Atari show is, "How big was the attendance?" The

answer can vary. In Washington at a pro-life rally a week prior to the PACE show, the crowd was first sized at 60,000, then the next day it grew to an estimated 250,000. The final claim by the pro-lifers was 500,000. Now divide those last two numbers by 1,000 and you'll get a fix on each day's attendance in Pittsburgh. So the question arises, is the attendance at Atari fests, as they charge more money for vendors and admissions, on ebb tide? Are the intense interest and countless questions that used to come in the box with your Atari, which compelled owners to join user groups and go to shows, any show, no longer out there. Or have the questions for original owners been answered and the number of new owners insufficient to generate the former crowds? Time and this summer and fall should answer that one.

And why the reference to baseball? In addition to the discouraging sales, the vendors caught what they thought was the smell of "Pittsburgh pirates." As the spokesman for the Independent Association of Atari Dealers, Nathan Potechin, President of ISD, and guardian of Calamus in the U.S., opined the suspicion that there were indications of pirating at the show evolved from three [rather minor?] incidents.

To outsiders these may seem minor, minor that is if you are not a developer with your livelihood on the line. Neodesk, which hopes to pay for its attendance at the shows by charging $20 for upgrades to its programs, had one customer exclaim, "$20 for an upgrade! Forget it. I'll get it from my friend." Then Charles Johnson from CodeHead heard a pair behind his booth with one chap saying he wanted to get "an upgrade" for a particular program and the other fellow urging him instead to get it free from his friend. And finally, George Miller of Michtron is said to have commented that he sold a $90 software package at a show discount of 50%, only to have its buyer return later and ask to return the package and get his money back, noting that he had been told he could download it off of a local BBS.

By this time, blood pressures were definitely on the rise. When word spread that there was a "program rental" group at the show, called "Atari Elite," the fuse was lit. Next morning a group of IAAD members and vendors, along with Bob Brody of Atari, who was attending the show, called for a meeting with the PACE organizers, and complained officially. PACE management was equally disturbed. In fact they had, for some time, been discussing the problem with Bob Brodie's predecessors. Bruce Markey, Pres. of PACE was quite lucid on GEnie describing the history of the software rental problem, as well as outlining the vast job of advertising the show that they had undertaken beforehand. What seems to have been lost in the tidal wave of frustration is the fact that attendees saw more new Atari equipment than any other U.S. show to date, even though it's all still to be released.

How Many ...

As we've constantly noted, the ferreting out of the real "numbers" for Atari is as difficult as reducing the $3 trillion U.S. national debt. One night about four years ago we had dinner with Sig Hartmann and opined that there ought to be about 200,000 ST's out in the U.S. by now. He smiled, noting that might be a little high. Would you believe the best estimate currently is 100,000 ST's in this country, with Atari claiming 750,000 in Germany and 300,000 in England. If you accepted Atari's claim that there are 1.5 million ST's in the world, that would mean another 350,000 for the rest of the world, including Canada and Australia. (We are inclined to take Sig's old stance and note that might be a little high.) How many Mega ST's in this country? How about 5,000, almost exactly the same number of SLM804's produced to date. How many dealers are there? Probably less than 200. How many units will Atari allocate for the U.S. this year? Including ST's, STe's, STacy's, TT's, and Mega's, a total of about 20,000. How many states in the U.S. have no Atari dealers? Ten. So, with numbers like that, when you stumble on the news that Atari is negotiating with East Germany to sell them hundreds of thousands of ST's, you cross your fingers. And what about the latest negotiations with Poland? You thought the 8-bit machine was dead. If Atari succeeds in the latest negotiations, Poland will reportedly have 300,000 130 XE's and 65 XE's. Sounds like Robert Ripley to us.

Quick Curtain

It was a short first act for the initial 40 STacy's that hit the U.S. streets last month. There was a piece of software included with the portable for formating the STacy's hard drive. Once you formatted the drive, you were off and running! However, 35 of the originals had to be returned. Seems that the hard drive "errored out" three quarters of the way through formatting. As the machines came pouring back, Atari discovered the software automatically parked the head of the drive after four minutes. Unfortunately, it took seven minutes to format the drive. Our report of the first STacy up and running at a U.S. dealership, The Computer Room, in Fort Lauderdale was correct. We noted of the two machines received, one had to be returned. The other would have also, but the clever dealer, by mistake, used his own software to format the drive.

The software problem has been taken care of, but don't expect the market to be flooded with STacy's. Atari has flown in several hundred in box lots from Taiwan. But less than two per existing dealer, if all dealers were qualified to sell them. The FCC still has only granted Class A approval--the machine can be sold to "a business consumer" but is not approved for home use. So, if in addition to your normal line, you sell some music software, then Atari will anoint you as one of their "music dealers" and on will come a brace of

STacy's. Atari hopes to fly in 600 more this month, so gradually the machines, which dealers claim are real sellers, will trickle down to all of us.

Juxtaposition

That's like when you set two things, ideas or objects, along side of each other and see how they look. Let's do it with two things on the Wall St. stock market, the Dow Jones averages and Atari's stock. Three days after Atari held its annual stockholders' meeting, the Dow Jones average climbed up well over 2800 and recorded a new, whopping, historical all time high. And Atari? Well it was down, down from its all time high of 12 3/4's to set its all time low of 4 3/4. Now that's juxtaposition.

Hats Off Award

Its rare that we applaud an inanimate object. But from our first reading of CN to the present we are quick to survey the advertisements to see how they contribute to the appearance of the magazine as well as promote their products. Thus, it is with great pleasure that we note the "Peace of Mind" advertisement on page 40 of the May issue of CN (this month also –JW). The ad, by Toad Computers of Severna Park, MD, was a winning layout. It was arresting, had eye appeal, gave a thorough appraisal and fine presentation of the product, the Toadfile 44 cartridge drive. In addition to bits of humor, the items were highly price competitive. Hats Off, Toad Computers!

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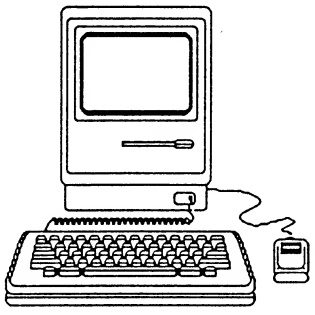

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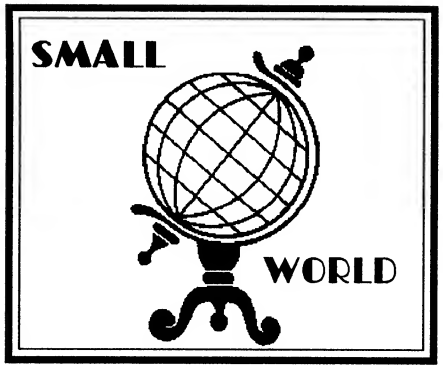


How and Why I First Learned Assembler

By: David Small

(Note: This originally was uploaded to GEnie a long time ago; if it seems familiar, that's why.)

Motivation

Why did I learn assembler?

To make money? Nope. To further my career? Nope. To escape from the university with a degree? Nope.

I learned assembler to play Empire competitively.

Now, we're not talking ST "Empire" here. We're talking about a fantastic, multi-player Star Trek game on a nationwide computer system called PLATO. It allowed up to 32 players to compete, in one of four teams, to "conquer the galaxy." The PLATO system ran on a Control Data Cyber mainframe, located in Minneapolis.

The display was a 512 x 512 graphics CRT, very much like the Atari's ST monochrome display, with small starships, photon torpedoes, phaser beams, planets, suns, and so on. There were around fifty commands, from simple things like turning and setting warp, to cloaking devices, tractor beams, and other goodies.

All this was back in 1978, when I was in college at Colorado State University. During my stay at CSU, I logged probably two thousand hours on the PLATO network, a lot of that in Empire.

Empire had been around on PLATO for awhile, and was a very popular game. It was the ultimate macho game, I suppose; the key to it was very fast and very accurate typing. Thus, the touch-typists who could work at unreal speed tended to win in battles.

For example, let's say you've closed in on an enemy.

A typical command sequence would be:

k (arrow) 9 : set course and warp 9

P (arrow) RETURN : fire 3 photon torpedoes at direction ARROW

P (arrow) RETURN : fire 3 photon torpedoes at direction ARROW

P (arrow) RETURN : fire 3 photon torpedoes at direction ARROW

F: fire phasers at last entered fire direction

BACK D BACK D BACK D (force three updates through system, to detonate the torpedoes, hopefully on top of the enemy).

The idea here was to set up a hyperjump away from your enemy, shovel nine torpedoes on top of him, then instantly jump away, then set off the torpedoes. The hyperjump was necessary because your enemy was busy doing the same thing to you, and you wanted to jump away from his torpedoes before they went off.

The above key sequences had to go in as quickly as possible; one or two seconds would make you barely competitive against a determined opponent. Some of the PLATO users were touch typists and extremely accurate in their typing.

And imagine a darkened room, with fifteen people in it, all playing Empire. It was eerie.

Dave's Secret

Now here's a little secret I've never told anyone:

I'm not a touch typist. Never have been.

What? you say. Dave Small, a hunt and peck typist? Well, it's true. I'm pretty fast for two fingers, but I make lots of mistakes; the backspace key on my system gets used a lot. (And imagine the source code to Spectre GCR, some 1,500,000 keystrokes long, all done hunt and peck...)

Anyway, I would regularly get clobbered in Empire by the hotshot touch typists. Typically, I'd get close to the Klingon ship, be banging away, miss one key, look up at the screen, and see all the subsequent key presses being rejected. Then, "You have been killed by ..."

I was part of the Federation team, the "Feddy Bears," who were in last place in Empire. Most of the Control Data Corp. employees, and the hated group down south of us at Colorado University, (I was at Colorado State--Aggies) played on the Klingon team.

The IST - 1

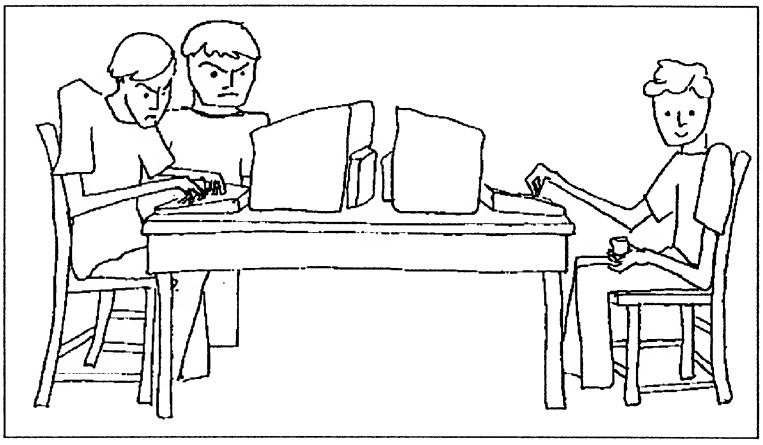
Now, I had one of Control Data's "IST – 1" PLATO terminals. It had an 8080 microprocessor in it, about 4K of available memory (but hey, you could order a 16K upgrade for a whopping large amount of money! This was 1978, remember.)

And there was, of all things, an assembler for it online, called "pptasm." You could thus download a program into the IST from the central mainframe and run it, much like what we do today with ST's and the networks.

One night, an evil thought crept into my mind: What if I could pro-

gram the computer to punch the keys for me? All the IST 8080 was doing was monitoring the keyboard, and if it "saw" a key, it would send it on to the mainframe. It also took any output from the mainframe and plotted it on screen--thus, it was just a terminal program. What I would be doing was the equivalent of a macro program, or an automatic log-in program that many people use nowadays.

So I began to learn 8080. Fortunately, I had a sample program, by Mark Sandmann, that made life a lot easier. Out came the manuals. I learned about the 8080--accumulators, data registers, JMP's and CALLs--assembly language. And every night, as I got clobbered in Empire, my determination grew. I'd learn 8080 or die trying; I cut classes, skipped meals, slept in the PLATO room, and so forth.



Finally, I got the first version going. If you pressed just an arrow key, the terminal would send a P command, then the arrow key, then RETURN to activate it--three keys in one.

This greatly improved things for me. I could just press three arrow keys, and get torpedoes on their way. My game began to improve.

Then, I started programming in options. There was the dreaded plus-arrow key, which would set course away from the enemy, set warp nine, send nine torpedoes and three phaser bolts towards him, and force the mainframe to set off the proximity fuses on the torps. All you'd do to trigger this long process was to press the "+" key, and an arrow key.

Then, I figured, why have to press an arrow key at all? The system knows where the enemy is; it just plotted his location on screen! So I changed the program to calculate his bearing and feed it in automatically. I also added a feature that plotted Hyperjump distances, so you could visually see exactly where a Hyperjump would land you--a series of expanding circles, like a sonar display.

It was really fun to press just a key and watch the Transmit light on the modem lighting up, as I "pressed" various keys at the highest speed the system could take them. I was, if you will, the ultimate virtual touch typist.

I passed news of this to the Federation team, and shortly we all began using the super-Empire game player. And we won a game against the much-hated Klingons, then another, then another. The Klingons were really stunned by this; they were typing as fast as possible, and we were out-typing them.

The time I remember the most was when I was one of two defenders orbiting Earth, defending it (it was the last planet left in the galaxy). Four Klingons popped up; I hyperjumped into the middle of them, and took out all four in a blur of activity.

In that year, the Federation team overtook the Klingons and became the champions; we held some wild celebrations. In fact, when I got married to Sandy in 1981, I drove from Austin, Texas to Minneapolis, Minnesota for my bachelor party; most of the Fed team was Minneapolis based, at the CDC headquarters. (I rented a car on a weekend "unlimited mileage" deal; I still remember the look of horror on the rental people's face when they calculated how many miles I'd put on it in one weekend).

Soon, of course, the Klingon people (many of whom were CDC system programmers) figured out what I'd done, and wrote their own "key pressers." Soon Empire became a war of automatic terminals--there were even programs written that would fly an entire mission (say, set course to a distant planet, bomb all the armies off it, then send a message to the Federation fleet announcing the planet was ready for take-over). Run that program on ten terminals at once, and you're really going to give the enemy acid indigestion.

All this was great fun for me. I was more than willing to pit my skill against the system programmers, and we had great fun.

Corporate Politics

At the same time as all this, I was fixing a really irritating feature of the IST, and making enemies at CDC. Whenever there would be line noise (the "{{{" you see on networks, for instance), the IST-1 would lock up, the ERROR light would turn on, and the terminal would freeze. You'd have to RESET the whole system, which had a side effect of logging you off. The idea was for the IST never to use bad data, but it couldn't recover from errors... a software problem CDC just wouldn't fix.

It drove me nuts. I'd be inside of Empire, clobbering someone, and the terminal would take a line hit--and I was gone.

So I dug around inside the IST-1's memory until I found the error flag, and made a simple program: Each half second, it would look for the ERROR light being on. If it was on, it would turn the light off, and reset the error status. Bingo, the terminal would come back alive.

The IST would now take line hits and ignore them. Oh, sure, sometimes you'd get junk plotted on screen, just like with an ST, but who cares? It sure beat having to re-dial into the system.

This little hack of mine became an extremely popular program on PLATO. Lots and lots of people started using it. Whoops: They stopped reporting line errors to PLATO's central communications department, because they didn't really care about line errors anymore, since the terminal ignored them.

And, the communications department people happened to be Klingons in Empire, as well. You can see it coming, can't you?

CDC's telecomm people became very irritated with me. Very, very irritated with me. Imagine the corporate politics at work: "We're not getting customer error reports anymore because of this Dave Small program." "Yep, assembler isn't a good thing to let customers have. Let's take it away."

This was my introduction to corporate politics. They wouldn't fix the idiot terminal program that locked up; instead, they took away access to the tools with which a customer could fix the problem himself. It thus took away some territory from the customers and gave it to CDC. Turf battle, in other words.

So, in an extremely controversial move, it was announced that all assembly language access to the IST-1 would be cut off after a certain date. This provoked real outrage among CDC's customers, some of whom were using assembly language for legitimate purposes--the flight training people at American Airlines, for instance. But CDC adopted a mule-like attitude, and cut off access anyway. (There were certain exceptions made for customers who paid a lot of money, but not for mere peons).

Naturally, the system people retained access to the assembler and tools, and to the Empire key-pressers. What a coincidence.

The Klingons began to win again in Empire, and I darn well knew how they were doing it.

Well, I wasn't standing still for this. I really hate having access to anything cut off, especially for idiot political reasons. This is one of the basics of the hacker philosophy: freedom of information exchange.

My first move was to get a CERL account; this was another PLATO system where they still allowed assembly language access. I'd dial up CERL in Champaign-Urbana, Illinois, load up my Empire terminal program, and then go back to Empire on the CDC system. Problem was, it was a long distance call, and I couldn't give the program to anyone without a CERL account. (CERL has always maintained a much freer and open system than CDC has. You can today ask CERL for an inexpensive PLATO account and use either an IBM or Mac terminal program, and yes, the Mac program works under Spectre. Check out Empire and Moria for really premiere stuff!).

So, I opened up the IST, found the boot (startup) EPROM, and looked at what happened during a RESET. I then learned enough about EPROMS to make a new one. This new one looked for certain data on the screen; if it found it, the RESET was aborted, and a download process could occur. Then, I wrote a little mainframe program that would download an assembly language program to the IST's screen; at that point, I'd press RESET, the program would be loaded to IST's program memory from screen memory, and I would be back running.

In other words, I hacked the terminal to allow me to download assembly programs into it, despite CDC.

And that's where I learned about EPROMs and ROMs and pinouts--stuff that came in mighty useful when Magic Sac / Spectre time came to my life.

Word leaked out among the hackers that I'd done this; soon I was swamped with requests for EPROMS. I sent them to the far corners of the world--some to Iceland, as I recall, to Norway, and all over the United States. The downloader program got constant heavy use, as people kept accessing the line-error fixer and Empire terminal program.

There wasn't a darn thing the system people could do about it, either. They were furious. It was a silly political situation; I'd taken back the turf they'd claimed for no good reason.

However, I made some enemies of big wheels at PLATO, and that would come back to haunt me later, when the hackers left PLATO, and the political faction got its way, unopposed.

I last signed into a PLATO a few years back, testing a Macintosh terminal program under the Magic Sac. (It worked). By then, PLATO had become a political turf battle-various factions were grabbing various territories. Barriers to access were being set up everywhere. It was becoming a computer police state; I left, and decided to remember just the happier parts.

Conclusion

I didn't learn assembly language in any class. I didn't write the usual programs that one learns assembly with. I didn't learn assembly to pass CS-201. I learned assembly because I had a deep, burning desire to clobber some certain smug Klingons. It motivated me to learn all about 2's complement, byte-long registers, display screens, and so forth. It was a crusade with me, and one I ended up winning.

I *strongly* recommend that if you want to learn a language, be it assembly or "C," that you set yourself a goal, a reason why you want to learn that language, that will motivate you. It makes the whole process fun instead of drudgery.

I've learned many languages since 8080, and applied this principle over and over. The first few times, it was unconscious; the last few, it was deliberate. It keeps programming fun for me.

The Magic Sac and Spectre 128 were more or less the same thing. I was real tired of people telling me that it was impossible for the ST to run Mac programs, so I went and proved it could be done. I had to learn 68000 to do this.

I need to get back into "C" these days, since it's becoming the Esperanto on computer languages, so I'm looking for a goal that will motivate me to learn "C." Still haven't found one yet, but I'm looking.

The other thing I learned was about corporate politics. Territory was far more important than service to the customers, and PLATO paid the price; today, it is a far smaller system than it was ten years ago. I've found this to be the case in many, many corporations, which is why small, competitive outfits can outperform larger corporations nearly every time. Only when people start having enough free time to play politics does a company get into trouble.

My solution to this was to not work for corporations anymore.

To bring this whole story to a close, when I was at Comdex this year, an old Klingon enemy dropped by the Spectre 128 booth; he'd been a longtime CDC employee, and we had fought many Empire battles against one another. He did have the class to keep things friendly, though, and when I'd last talked to him, eight years ago, we'd been friends. He gave me his business card; now, he works for Apple.

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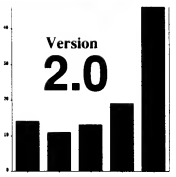

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The Junkyard Pussycat

by John Barnes

Portfolio Surprise

The Junkyard Pussycat was lurking near the back of the room as a couple of hundred crystallographers were gathered to hear about the future of computing in their art. Imagine the Pussycat's surprise when the featured speaker reached into his jacket pocket and pulled out an Atari Portfolio in order to make a point about how, in the not too distant future, we would be carrying supercomputers around in our pockets.

No, the speaker did not claim that the Portfolio was a supercomputer, but he did give it high marks for its ability to run MS-DOS software and he was especially intrigued by its ability to sound off when dialing a telephone.

The ST folks might not like Portfolios very much, but Atari may actually have found a winner for itself.

A Bum Rap for Command Line Interpreters

The Junkyard Pussycat, while he likes the WIMP (Window, Icon, Menu, Pointer) approach to personal computing, hates to see people get self-righteous about the virtues of this way of doing things. A recent MacNovice column in the Washington Apple Pi journal bemoaning the obtuseness of the "C:>" prompt on MS-DOS computers started the juices flowing again.

In fact the "C:>" prompt is no more obtuse than a blank desktop with only a disk drive icon and a menu bar facing the user (see the May "Starting Block" column for a pictorial example). The Pussycat has seen plenty of people freeze up when they are confronted by such images, but this is all that Macintosh and Atari ST users see when they follow the instructions and turn the computer on for the first time.

The MacNovice and his Atari think-alikes are not being completely candid when they ignore the numerous INIT's, CDEV's, and DA's that have to be installed to make the system truly friendly to an inexperienced user.

The WIMP fraternity is also hiding its head in the sand if it thinks that others are not going to take advantage of improved user interfaces. WIMP techniques are now popping up in UNIX systems on Suns, Irises, and VAXes. The MS-DOS world is gravitating toward *PC Shell* and *Deskview*.

Even if the C:> prompt is obtuse, there are ways to diminish the impact. Most office computers allow a secretary to select from a menu of routine tasks to do Word Processing or time and attendance recordkeeping. Even home users do not seem to find this much of a challenge and it is no great task to set up an "autoexec.bat" file to make it easy for other family members to use the machine. If there are 40 million personal computers in the US (as was recently stated on one of the Sunday news shows on TV) it is a safe bet that at least 30 million of them use the C:> prompt. Millions of Atari 8-bit users had to do something similar on their machines. On the other hand, the Mac, which pioneered the WIMP approach, has been most successful at invading the desktops of technical types, who normally shun simplicity.

Atari users are more fortunate than Mac users because it is easy for us to employ whichever approach best suits the problem. The WIMP method is best with interactive work. It prevents spelling mistakes, and it provides easy access to reminders of just what can be done. For program development work or lengthy production jobs it is usually nicer to set up a batch file, turn it loose, and do something else while the machine is chomping away.

The nicest command line environment that the Pussycat has found is named *Gulam* and is available from GEnie or the Internet or CN Library disk #145. This implementation is infinitely customizable and it has several nice touches. The UNIX-like flavor of the thing is a little off-putting at first, but it can be tamed.

Some of the less mature members of the Atari community turn their noses up at anything that does not use a full GEM interface. By doing so they often miss opportunities to make full use of the power of their machines. T_EX, for example, is perhaps the most powerful document preparation (or, if you prefer, desktop publishing) tool available for the ST. It does not, however, make good sense to run it interactively. The *Greased Lightning* compiler for dBMAN is another example of a power tool that shines when run in a batch mode. These examples share the common feature that they use a lot of small modules to do their work. Such small modules are much simpler to build and maintain than are complex structures that must be surrounded by a graphical shell.

While it is nice to see software that looks attractive, it is even better to have software that does good work.

Darek Mihocka

The Junkyard Pussycat and about 20 other denizens of the GEnie electronic town meeting, were pleasantly surprised on Wednesday, May 22, when Darek Mihocka, formerly the *XFormer ST* whiz, who, though Atari said it couldn't be done, gave us the means to run our 8-bit software on the ST, expressed some unusual views. Most recently, he has become one of the guiding lights, with Ignac Kolenko, behind *Quick ST*. Their company is called "Branch Always," after an assembly language instruction that is said to be the first one in any program for the ST.

His first view was that he really didn't care what new hardware Atari was going to release because he felt that the existing installed base (according to Darek) of 2 million ST machines provided sufficient opportunity for a developer. A little refinement of the numbers lowered the guesstimate to one million worldwide, but he seems to feel that this is still a good opening for a young person who is not afraid to take risks.

He was pleasantly surprised by over 2000 sales of *Quick ST II* in the past four months and he currently finds it a rewarding full time proposition. He appears to have been somewhat surprised that taking *Quick ST* commercial actually boosted sales over what the product was enjoying as shareware. Both Double Click and Codehead have made similar moves, and we may be seeing a pattern that reflects a more mature, but yet still diverse, style of Atari development.

It appears that Branch Always also has expectations of cracking the European market. They are now shipping a new collection of utilities called *Quick Tools*, which appears to be a replacement for the shareware *Quick Utilities* and contains some added features.

The atmosphere appears to be a bit frenzied, though, and the community needs to reserve judgement until more of the bugs are ironed out and users get some field experience.

Curiously enough, Darek is not a registered Atari developer. When pressed on this point by D. A. Brumleve, who was acting as a cheerleader and recruiting sergeant for the Independent Association of Atari Developers, Darek became quite vehement about his lack of desire to put money into Sam Tramiel's pocket for a product (registered developer status) that he felt was dubious. A couple of the other registered developers chimed in with statements to the effect that the new support was worth every cent of the $300 registration fee.

It is sad to see that Atari has alienated someone who could do them some real good, but it is encouraging that some people are expressing confidence in Charles Cherry's new developer program.

Darek expressed the view that keeping product prices low was one way to gain market acceptance. With *Quick ST* carrying a $20 suggested retail price tag it is unlikely that Branch Always gets more than about $8.50 for each copy that it sells to a distributor. Subtract business expenses and that does not leave a lot of bread to put on the table. If Branch Always wants to stay in small utility programs, it will have to keep coming up with new products fast enough to stay ahead of the market. Too many Atari developers release buggy products that require endless tinkering (and endless update purchases by users) after their release. This maintenance effort soon starts to eat into a developer's ability to come up with new products and the momentum starts to slow. As recent university graduates in computer engineering, hopefully, Darek and Ignac will keep up their homework skills to make sure that their fine products hit the market running. As two obviously bright young men, they should be able to avoid the trap of falling behind in their bug fixing, which will mean that their products will do well.

The "New" IAAD

There has apparently been a shakeup at the Association of Atari Developers. After a period of low visibility, the organization seems to be taking on more visibility with Nathan Potechin of ISD as an articulate and concerned spokesman.

The message count in their category on GEnie indicates a fair amount of traffic, but the category is closed to non-members so that it is impossible to tell what is actually happening.

The new leadership seems to be willing to maintain a higher public profile, so look for them at upcoming shows, particularly the WAACE and Glendale affairs.

If Atari's developer support program is actually taking care of the people who need to sign non-disclosure agreements, perhaps the IAAD could re-examine its policy of admitting only registered Atari developers so that it could benefit from the ideas and the work of the Darek Mihocka's of the world.

The Real Computer Scientists

The Pussycat was schmoozing with a couple of his fellow journalists a couple of weeks ago when the topic of computer science education came up. There seemed to be a consensus that the best way to do computer science was with a firm background in something else.

It seems appropriate to think of this now, as millions of parents all over the country are getting ready to mortgage the rest of their lives to educate their offspring.

It seems that the problems that academic computer science types set for their students do not have

much relevance to the challenges that are facing corporations and research institutions that have to use computers to do science and engineering. On the other hand, the kinds of problem solving skills that people learn while studying physics, chemistry, mathematics, electrical engineering, and the like seem to stand them in good stead when they have to use computers in their work.

Computers are, after all, nothing but tools. As one of the Pussycat's colleagues pointed out, no one goes to school to learn about hammers, they serve apprenticeships to become carpenters. It is also true that those who design skyscrapers have to serve much more demanding apprenticeships than do those who pound nails, but the rewards are also much greater.

Science magazine, the journal of the American Association for the Advancement of Science, recently devoted a lot of coverage to upcoming shortages in scientific manpower. Other publications, organizations, and government officials have been harping on this issue for years.

The knowledge that can be gained by solving problems in the structure of new materials, in the origins of disease, or on the impact of economic decisions is the stuff of human progress. In contrast to this, poking around in the innards of operating systems and microchips seems mundane, indeed, even if it is necessary.

Sadly, too little of the time that our young spend at computer consoles is devoted to this kind of learning. Perhaps software developers find that games that employ some understanding of physical, economic, or ecological principles are too much of a challenge for them. Or, perhaps, it is just more fun to deny the idea that it actually would take centuries to travel between star systems, that the energy required to deliver instantaneous oblivion for one's enemies cannot be conveniently contained in a hand held device, or that mutations are totally unlikely to produce turtles with human thought processes.

While new tools like *Mathematica*, *Cricket Graph*, and others take much of the drudgery out of workplace scientific computing, the process of developing tools for teaching science in our schools has been a slow one. The journal, *Computers in Physics*, published by the American Institute of Physics (AIP), contains some informative articles on this subject. Do not let the "journal" designation put you off. *Computers in Physics* also has a lively mix of news, reviews, advertising, and columns. *Computers in Physics* is available to non-members for $30 per year from the American Institute of Physics. Keep it in mind the next time you encounter a computer-active student who needs a science fair project.

The AIP, with some initial support from IBM, has recently started up a service to distribute physics academic software, and its PINET electronic information service has been expanded to include more topics on computation.

The Junkyard Pussycat will be happy to reprint data on advanced (high school and college) educational software sent in by *Current Notes* readers. Physics, chemistry, biology, trigonometry, and calculus might be much more instructive and enjoyable if we can get good quality machines and programs into classrooms soon.

It is not only our budding scientists and mathematicians who need better training. Politicians and, by extension, members of the electorate, are constantly called upon to make decisions about extremely complex matters. The demise of the Strategic Defense Initiative [ST Ed. Comment: If it is "demised"] is not making nearly the same kinds of headlines as did the advent of "Star Wars," although the multi-billion dollar damage to the economy has already been done.

Meanwhile, mom and dad, we can only hope you're doing the best you can to ensure that tomorrow's leaders learn as much about the fascinating real world of natural laws and processes as they can.

Hello Out There

A number of readers have put forth pet peeves or pet inspirations for the Junkyard Pussycat to follow up on. The Pussycat welcomes these suggestions. One reader suggested a survey of "technical support" activities by Atari Vendors. This looks like a real dish of milk for the Pussycat, and he would like to hear from readers who have pats and pans to share with the rest of us. Send your comments to *Current Notes* at the address listed on the contents page, or better, email them to J.D.BARNES on GEnie, or John Barnes on ARMUDIC or Tangent Line.

It would be nice to be able to present a solid picture of the experiences that Atari users are having when it comes time to get help or updates on the goods they buy.

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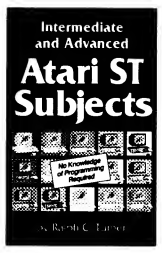

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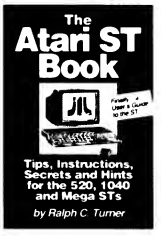

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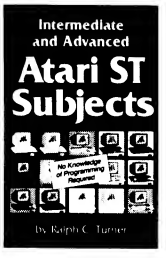

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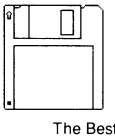

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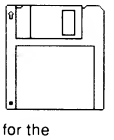

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STARTING BLOCK

by Richard Gunter

Random Thoughts

New Pebbles? As I write this, April 15th is nicely past and the only 1040 on my mind is made by Atari. Number One Son has been accepted by the college he wanted and the scramble for financing is underway. A much-delayed Spring cleaning of the garage is just crying to be launched. And this column has been running for a year and a half.

Browsing through the hard drive, I found some notes I'd started accumulating when this column was begun. This seems a good time to toss a few of these pebbles into the bit stream.

Directions. What direction would you, the *Current Notes* readers, like to see this column take in coming months? Assuming that Our Editor and Inestimable Publisher don't fire me outa here, that is.

Would you like to see more columns on the special needs of the neophyte Atarian? Reviews? Tutorials (what sort)? How to's on specific products?

I don't want to forget the new Atari user, partly because I'd like to believe there still **are** new users coming into our fold. Besides, serving beginners' needs was the reason this column was started.

Let me know what you'd like to see, and I'll take a shot, if it's within range. At the end of this column you'll find a list of ways to get in touch.

C? Si! I resurrected the C compiler a week or so ago and started playing with teaching myself the language. C has become the language of choice in a number of areas, so it's likely to be of use at work, eventually.

The notation takes a little getting used to, and it's becoming apparent that I'm going to have to get into the rudiments of GEM pretty soon. I'll keep you posted, but don't think this column is the best place for programming tutorials.

No Perfect Language. One software guru (can't remember which) has said he didn't know what the programming language of the future would look like, but its name would be spelled FORTRAN. Maybe. I like FORTRAN for some applications, but wouldn't want to write a database application with it.

Programming languages are like word processors; every programmer has his/her favorite. I suspect a survey would reveal that an individual's favorite is the first one in which he or she did any serious work.

From time to time, I run across a message thread on one BBS or another in which the relative merits of programming languages are debated. Passionate devotees and equally passionate nay-sayers all abound. I can't help but chuckle; there "ain't no setch thing" as an ideal programming language.

WordPerfect. Since I've never been satisfied with the printout I get from simply dumping text files to the Atari Laser printer, I usually reformat them as *WordPerfect* documents.

Recently, I wanted to reformat a collection of articles I'd downloaded, and got the notion of finding out just how far I could push *WordPerfect* before it choked. WP's "virtual directory" is the place it keeps working files, and I usually use a Ramdisk for that. For this task, I configured a Ramdisk of about 500 KBytes, then started adding the articles, going through each one and setting marks for the automatic Table of Contents generator.

Somewhere around 100 pages, I ran out of virtual directory space. By that time, large movements around the document had gotten pretty slow. I changed the virtual directory to a hard drive partition and kept going. Boy! Did the hard drive get a workout after that! It appeared that WP wants enough room in the virtual directory to store a complete copy of the document, plus a good deal more. Moving around the document causes it to load more data from its "working" copy. I think.

My final document turned out to be 150 pages, and the four-page Table of Contents took something like seven minutes to build. Whew! Other than the severe slowdown, I had no problems, though. And the TOC generator works great!

Incidentally, this rather large document can be printed from the Print Control menu without loading, so I can print it with my normal configuration. Your Great American Novel is best built by chapters, though; the performance degradation makes a single large document too awkward to work with conveniently.

Two Sides of the SLM804. Speaking of the Atari Laser printer, printing on both sides of the paper is not

too difficult. Here's how I do it with *WordPerfect* and Timeworks *Publisher ST*.

First off, I'm still using the not-so-great Diablo Emulator that came with the printer. With the Diablo Emulator, make sure the Setup630 accessory is loaded. Before printing the document, run the accessory and specify Paper Feed: TRAY and Print Pages: ODD. Now tell *WordPerfect* to print the entire document. The emulator will print the first page it sees, throw away the next, print the next, and so on.

Run the Setup630 accessory again, this time setting Print Pages: EVEN. If the document is short, also set Paper Feed: MANUAL. Once again, print the entire document. Feed the stack of paper printed the first time through the manual feed slot, one sheet at a time. For a larger document, leave the Paper Feed option on TRAY, and place the previously printed stack in the tray.

Timeworks is a bit easier. Just tell the program to print right pages only, and let the printer work from the tray. For the second side, pull the tray out a short distance until the empty indicator lights up. Now tell the program to print left pages, and feed the sheets through the slot, or place the stack of printed sheets in the tray for automatic feed.

If you're using *Ultrascript*, print right pages from *Timeworks* to one postscript file, then rename the file and print the left pages. Run *Ultrascript* to do the actual printing, feeding the paper manually or from the tray.

Into the Deep. A file archiver, such as ARC or LHARC is a good tool for moving files into "deep storage."

A tip: always test the archived file before erasing the original data. If you're a belt **and** suspenders type, make the archive file, then extract the data files from the archive and compare them to the originals with a compare program. They'd better be identical.

Another file management tip, one we've discussed before, is to put all the files for a project into a single folder. This keeps everything together while you're working on the project, and moving the data to deep storage is simplicity itself; just ARC the entire contents of the folder, and erase the whole folder when finished.

Data Organization. A hard disk can get terribly cluttered if you don't design a rational organization for your data and program files.

Lay out as much of your directory (folder) structure as possible before moving your files into it. You may want to draw a pictureof the planned structure on a piece of paper first. It saves a lot of file copy operations if you know what shape you're building first.

Testing Utilities. When you acquire a new file utility or hard drive backup program, practice with it to get used to the way it works. It doesn't hurt to find out whether the program works properly, either.

Picture files can be useful in running such tests. RLE and Spectrum formats are particularly sensitive to any damage due to copy errors. A quick shot with a slide show program will often reveal problems most, er, graphically.

Making Notes. Use README files. There's no magic or special file type here; just a short text file in which you can make quick notes to identify the contents of a folder or even an ARChive file. Just use any word processor or text editor to jot down a brief description, save the file as text, and include it with the rest of the data. Double click on the file to display it.

Quick Menus. *Hotwire!* from CodeHead, is a dandy custom menu tool for your PD game collection. Put a bunch of games on a floppy disk, in separate folders if you wish, and add a copy of Hotwire in the floppy's AUTO folder.

Set *Hotwire* to auto-start, then set up its menu for the games on that disk. Each one is now a mouse click away or a keystroke away. Especially nice if you're setting up a game library for the kids.

The shareware program *Superboot* can be used in a similar way--just program a function key for each game, and set *Superboot* to run always.

Boot from the Hard Drive. If you have a hard drive, configure your system to boot from it rather than a floppy disk. The owner's manual should tell you how to do this, and it's far more convenient. All your accessories and autorun programs can be placed on the hard drive, and you don't have to worry about which boot disk is which.

The ST will also boot a bit faster if you put a blank (formatted) disk in floppy drive A. The reason is that TOS looks for a floppy disk before looking for the hard drive, and it takes several seconds to recognize that the floppy drive is empty.

Feedback Loop. As I mentioned at the beginning, I'd like to hear about your ideas for future columns.

If you're a modem user, you can leave me a message on the ARMUDIC BBS (703-450-3910), or on CompuServe. My CompuServe PPN (user id) is 70117,2565. Best to use CompuServe's MAIL facility; messages in the forums tend to disappear after a few days, and I might miss yours. By conventional mail, my address is: Richard A. Gunter, 12609 Westlodge Ct., Herndon, VA 22070.

Retroactive Introductions

by David Troy

Hey, hey, y'all. What with my articles on hard disks and such, I've been writing this column for about 6 months, and I'd like to backtrack a little. I didn't really have much of a chance to introduce myself, as a person, that is, when I started writing this column. I believe that for a writer to reach his maximum effectiveness, it is necessary that both writer and reader have a good understanding of each other. Great writers, and other generally swell people throughout history, have opened their lives to their public in the interests of telling stories and making points. While I have told you a few things about myself, here and there, I'd like to take a paragraph or so and let you know a little about my background and family. That way when I tell you stories about the "strange look" traditionally received when I say I use an ST, or my Mom and stories of "Calamus ate it, really!" or my business partner Ray, who contends that I never finish a project, they will mean a little more, be a little more vivid, and you'll be just a little closer to the characters. Yes--it will be just like a bad sitcom!

Me

I'm 18 years old, and I've been using Atari computers for the past nine years. I, just two hours ago, finished being a freshman at Johns Hopkins University in Baltimore. I am a computer science major (as of last week), switched from Behavioral Biology. Behavioral Biology was neat, but I don't think I would have had the patience to make hippocampal lesions on rat brains and then observe the effect that they had on the rats' directional abilities. Yes, it would have been interesting, but far too maddening. So, I surrendered to computer science. I always wanted to avoid it just because I've been so surrounded by computers for the past ten years, and have seen far too much of them. But, I seem to be *good at* computer science, and OK at a lot of other things. So, that was that.

I am a co-owner and co-operator of Toad Computers. We're an Atari dealer here in Maryland; we sell hard drives and other ST products worldwide. (Is this a plug? Tell me when it starts being a plug and I'll stop - really! [Smirk.]) So anyway, Ray and I started this when I was 14 and he was 19, and we've been permanent fixtures in the Atari world since. We plan to stay, too. Ray's at University of Maryland working on an Information Systems Management degree. Ray and I make a pretty decent partnership. You might call it love/hate, or just two pigheaded people trying to make ends meet. I'll admit that I can be unreliable, moody, annoying, stubborn, and self-centered. But then again, so can Ray. Between the two of us, though, we seem to manage.

I was born to simple people, in a cottonfield, before the war, when the South was a still a soft and elegant young lady--damn it--there goes my southern romanticism again... Geez... My dad is an electrical engineer and my mother an educator. We moved to Maryland from southern California in 1976, as my father had left the Air Force. He now works with a defense contracting firm in Annapolis, and my mother operates a publishing company, using ST's, thank you. My dad is largely responsible for my being in computers today. He provided me with a Sinclair $99 wonder in 1979, and that's when I started programming. I moved to a CP/M machine at home and to 400s and 800s which were present at the school my mother helped to start. I got my own 800XL in 1983. My Stacy should be in soon. My father now owns a Mega 2, and wants a Stacy, too. My mom has the DTP rig at home, and it has become the "family computer," (don't read that line, Mom). It *is* in the family room. It *is* a Mega 4, with a laser printer--and a hand scanner. Yeah, it's the family computer. (Smirk.)

So that's me. I'm pretty much a regular kinda guy - and I'm sure you are, too (unless, of course you're a regular kinda gal.) Please! Tell me about you! I'm waiting, with baited breath, to hear from you. That's all for me on introductions.

Pittsburgh

I went to the Atarifest in Pittsburgh on the 28th and 29th of April. Many people considered the show to be a disappointment, and in lots of ways I suppose it was. We, as all other dealers that I spoke to, didn't find it to be an especially brisk show. Sometimes that's due to social, economic and cultural pressures. This time it was because nobody went.

Unofficially, I heard rumors that the attendance on the first day was between 300 and 400. That's no huge crowd. I don't know what the attendance on Sunday was, but it wasn't more than Saturday's. I had been to the past two of these PACE shows, one in November

1986, the other in April 1988, and both were much more exciting than this one. The show was downgraded this year from a rather nice hotel/convention facility to a high school--the reverse of what the WAACE show is doing this year. I don't know why this was done. The cost for vendors was somewhat less in the high school environment, but on the other hand, the profit was significantly less, too. Maybe the show should have been promoted more--maybe all of the Atari users died and went to heaven. I don't know.

Another point of tension was an outfit at the show that had a "software rental library." Some vendors were deprived of sales by this company, as potential customers found they could pirate software rather than buy it. Atari's Bob Brodie was outraged by this; he brought several nice door prizes to give away, including a Megafile 60. After hearing about the piracy problem, he refused to offer the prizes for donation. It didn't help any that he didn't get there until Sunday, either. The most exciting part of the show was seeing the CD ROM, STe, and STacy all together in a high school cafeteria.

So that was Pittsburgh. I hope that the folks at PACE can promote the show better next time - they have all my support. Let's not rake these guys over the coals for having a less than perfect show. The benefit the vendors gained just by being present is significant, and justifies the cost of attending in my opinion. Let's all put our heads together and ask why things happened the way they did, and see what we can do to help this and all other Atari events in the future.

Questions and Answers

Eight Bits & Connectivity:

I received several letters from readers regarding my piece on connecting STs to eight bits. One man, whose name I will not mention because of security reasons (uh, huh), wondered what I meant by saying that pins 1, 2 and 8 of the eight bit serial port should be connected to pins 5 and 20 of the ST's serial port, especially when that information is presented in table form. Essentially, pins 1, 2 and 8 should all be connected together on one end, as should pins 5 and 20 of the ST on the other end. The reason why we're smashing all these pins together is that for many terminal programs to operate properly (the one that I'm thinking of is *850 Express!*), it is necessary for the computer to think that the DTR (Data Terminal Ready) and the CD (Civil Defense - no - umm.. Carrier Detect) lines are on. This is accomplished by tying all of those lines together. This discovery was made by trial and error by yours truly, as I was trying to use *850 Express!* to transfer stuff on my ST. So anyway, that's the deal, and we thank Mr. Anonymous for his question. He gets a PD Disk coupon.

Two other readers wanted to know if it was possible to hook up their Atari-eight-bit-specific printers to the ST via the popular PD ST XFORMER cable (say that 5 times fast with a rabbit strapped to the back of your skull!). My answer is yes, you can hook it up, but no, nothing will come out of the printer. Let me elaborate.

Since TOS (the ST's OS) knows nothing about the XFORMER cable, when you try to print out to its printer port, it will toggle all sorts of lines which would make lots of sense if they were wired up to a centronics printer. Instead, you've got it feeding to a serial device (the eight-bit's printer), with the ST's printer port data lines going who knows where. The printer, say it's an XMM801 dot matrix printer, is sitting there being most baffled, as a couple of its lines are being lit up now and again in a pattern which it can't tell from Martians. This is bad. What needs to happen is there needs to be a driver placed in the ST, which intercepts the call to the ST's printer port and says, "But wait, we're using an XMM801. Only I know how to communicate with it!" It will translate the information-to-be-printed into a wonderfully joyous 19200 baud toggling of the correct lines, which your XMM801 will understand. This is great!

Only one problem--that driver doesn't exist, as far as I know. There is a guy who wrote a driver to connect eight bit disk drives to the ST for use from within TOS - it intercepts calls to certain disk drives and converts that into something your 1050 can understand. Sound familiar? It should. This program is *very similar* to what's needed for the printer to work! So, what I did first was look around for a printer driver and found none. Then I left a message to the fellow who wrote the ST to disk drive driver, asking him if he could modify it to work with the eight bit printers, or at least release the source code so somebody could. I have as yet received no response, but I hope to get a reply soon. I agree with these readers that this ability would bring a lot of usefulness to printers which might otherwise be paperweights.

Multitasking

Yet another reader, Anthony DePietro, wanted to know what multitasking actually was, and what the deal was with it on the ST. He also wanted to know how multiuser systems worked. Well, multitasking is being able to talk and chew gum at the same time. Multiuser is being able to chew gum and talk to *two* people at the same time.

Multitasking is actually a pretty funky word which was latched onto by the general world because it sounds pretty neet-o. Gee, if it does *multitasking*, I can write letters and play *Pac Man* all at the same time. Well, yeah. Multitasking is almost entirely a function of

the operating system software, at least on today's machines. Computers today are Von Neumann machines (named that because he first described them this way), which means that they process tasks (programs) serially, one little instruction at a time. They **can't** do two things at once, on an elementary level--that is, there is no way that a computer as we know it can simultaneously multiply something by 42 and subtract 6 from something else. That must be broken down into two discrete tasks, and as a result, one of those tasks must be executed before the other.

Now, you may know people who can't do two things at once, just like a Von Neumann computer, but you can program them to manage several tasks at the same time. Secretaries, just to give an example, routinely manage several tasks simultaneously, like answering the phone, typing letters, or getting coffee. But that's only because their brain is smart enough to interpret their job description, and know that all of the subtasks in performing their job must be **prioritized** and **broken down** into **discrete chunks** which can be performed in some particular **sequence**.

Multitasking works this way - as a manager of tasks. It knows what tasks must be accomplished (as defined by the programmer), and it prioritizes the subtasks based on their relative importance (as defined by the programmer) and then hands the processor single subtasks which it can then execute. The difference between a multitasking computer system and a multitasking human is that the human has the ability to dynamically and infinitely re-write its task handling abilities based on new information. A multitasking computer system knows only what the programmer told it, and anything the programmer didn't tell it may cause the OS to be quite surprised. As a result, multitasking computer systems may not always be too efficient. They may delegate a lot of the processor's time to something you don't care about, and don't mind if it takes eight hours to accomplish. This would take away a lot of the speed and fun from the immediate need, *Pac Man!*

So, the point is that "multitasking" is entirely a function of the operating system software, and its ability to handle different tasks is finitely limited by the forethought of the programmer. Multiuser is simply an extension of multitasking. Setting up a multiuser operating system may require paying a little more special attention to input and output, but essentially, it's a glorified multitasking system. You're running different tasks, and it may as well be for different users! So that's that.

Now, is multitasking supported on the ST or not? TOS, the ST's operating system has no specific provision for multitasking. But the 68000 is perfectly capable of it! (Look at the Amiga OS--it supports limited multitasking.) There are a couple of operating system shells--programs that fit around and control some operating system functions--which support multitasking. One is Beckemeyer's *MT-C Shell*. There are a couple of similar public domain programs as well. The limitations with these programs are many. They take up a lot of RAM and only a small fraction of all ST programs will work with them. The problem is that in order for the program to work within the control of the shell, the program must only use calls that the shell knows how to deal with. This means no super-hyper-digital graphics or anything like that. You can only use TOS-based programs, mostly ones that do exciting things like print your name on the screen. Oh, wow. That's a slight exaggeration, but the point I'm trying to make is that multitasking on the ST is not for the consumer, and is more for those interested in how it works. This may change one day, but I'm not betting anything on it.

The new TT will be much more aimed at multitasking. UNIX is an inherently multitasking operating system, and Atari may work some multitasking into TOS finally. But again, multitasking at home on the current batch of computers is really not the garden of Eden. You really will have a hard time playing *Pac Man* and using *WordPerfect* simultaneously.

Well, I've gone on far enough. My Dad's insisting on watching a program about tanks on public TV, and that makes it hard to write. (The stereo guns are a little too much...) When you use the "family" computer, in the "family room," you're subject to the "family." But, I've said what I want to say anyway. Next time, I hope to talk a little about parallel processing, whatever questions I receive, and a report about June Comdex in Atlanta. I'm going to Comdex for the first time. Since my Dad works for a company which is owned collectively by the airlines, I can fly space-available on many airlines at very low prices--until I turn 21. But, on the other hand, once I get there, I can't rent a car, until I turn 21. That's a major catch 22 (or should I say catch 21?)

So anyway, that's that. Here's how to reach me again - just all the usual ways:

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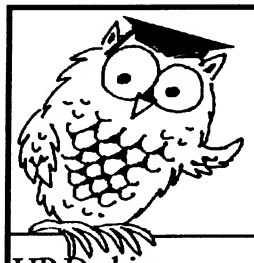

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Noise! What Noise?

By Pat. Raymore

One can walk into a computer store and ask how much RAM a particular computer has or how fast it is. The salesperson will be quick to answer all of these fantasy questions. Now ask, "How quiet is this particular unit?" You will get one of several responses, all of which are likely to amuse you. I find the most common reaction is a blank stare, followed by a diplomatic but evasive answer. If he (or she) is honest, he will say he does not know. Digging through the manual usually does no good. Not even the thicker and more expansive Mega ST manual mentions a word. Some will even try to convince you that it just does not matter. The truth is that it does matter and matters a lot. When I first acquired my 1040 ST, I took its quiet operation for granted. I thought all computers were quiet. Wrong! A month or so later, while visiting a friend with an IBM clone, I was appalled at the roar that his computer made as he demonstrated a program or two for me.

Boy! Did Atari have some surprises for me. The acquisition of the Mega ST introduced me to the world of noise. I was rather distraught by the constant whirling of the "cooling" fan. In fact, I was so bothered by it that I wrote Atari. The letter I received back was more amusing than informative. In retrospect, its contents could have been predicted. They described the fans sound as "soft" and stated that if it was anything else I should have it checked at a service center. Now the over-ripened banana I had for breakfast this morning was soft. The fan on my stereo amplifier is quiet. The fan on my Mega ST at 11 o'clock at night when I am trying to think sounds like a freight train. (I have been known to exaggerate.)

Sound Pressure Levels

(in Decibels)

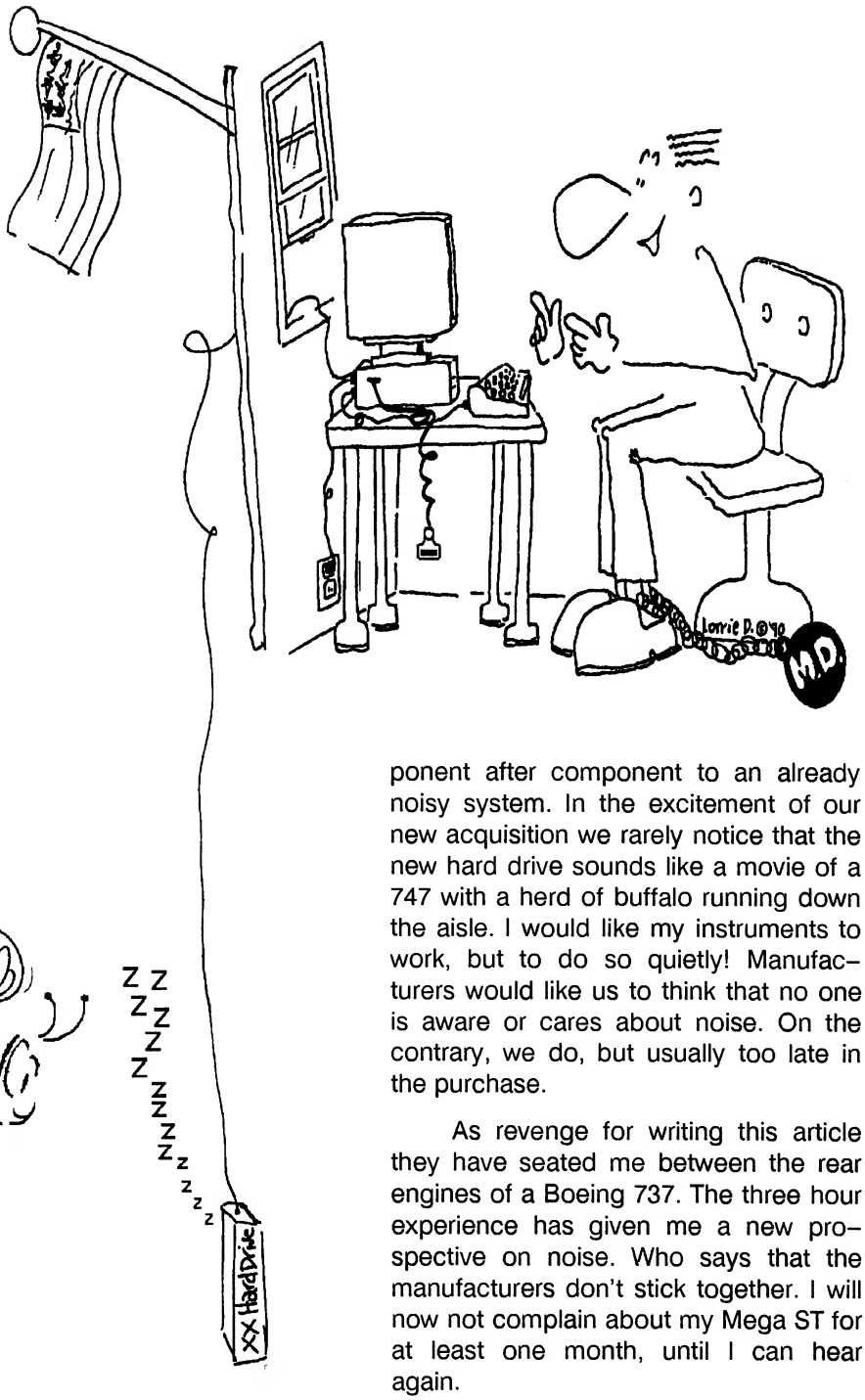
0	Threshold of hearing
10	Cloth dropped on floor
20	Rustle of leaves
30	Soft whisper
40	Empty office
50	Average residence
60	Conversational speech
75	Busy traffic
80	Noisy restaurant
90	Subway
100	Pneumatic drill
120	Pain threshold
140	Jet engine

Atari had yet another surprise for me with their SLM 804 laser printer. Not only did it have a whirl and a hum, but in addition, it sucked up a generous 300 watts of power while at idle. Why turn on the heater in your small computer study? Just turn on your laser printer. Now, in a busy office setting, the whirling fan is hardly objectionable, but it does contribute to the general fatigue.

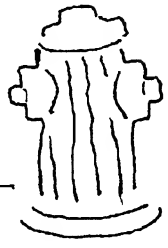
A serious noise maker happens to be my dot matrix printer (and yours, too). My Star NP-10 comes in at 85 decibels as it bites into computer paper. Rambo with an AK-47 cannot hold a candle to this beast. The least I can do while it is printing is go to hide in the refrigerator. The noisy beast inspired me to look for a quieter dot matrix printer. Brother makes a nice series that is tolerable but believe me I have yet to meet a dot matrix printer that is quiet. There are ways of quieting a dot matrix printer but they are all impractical. For instance, there are commercial sound proof (bread) boxes that you put them in. Inconvenience at best. Putting the printer in other room is a solution that I have actually seen businesses resort to. The saving grace about a dot matrix printer is that they are only intermittent noise makers, and if you don't have anything to print then you don't have to put up with the

chatter. In addition, there are alteratives to the dot matrix printer such the Canon or HP ink jet printers. However, these solutions are a bit more expensive.

This brings me to the most chronic noise maker in a computer system: the hard drive. There is a temptation to say that fans in a hard drive are always noisy, but being a audiophile, I happen to know that fans do not have to be noisy. If the fan is noisy it is because the manufacturer chose to make it noisy. Yes, the hard drive mechanism is, itself, noisy, but so is a Chevy without a muffler. There are ways of making things quieter. What is needed here is a little research and development aimed specifically at sound insulation. Some manufacturers actually take the time to measure and list the quantity of noise their instruments make. The standard convention is to measure sound in decibels at 1 meter from the instrument. Although this is informative I know no one who works at that distance from his or her computer. You would have to have hands as long as your legs. This brings me to an important fact. The amount of noise that you hear depends not only on the ambient noise level but factors such as the size of your room, reflexive walls, etc. What may sound like a whisper in the computer store becomes an orchestra at home. Trying to gauge sound in a busy store is difficult indeed. When necessity calls, it is easy to become more tolerant of escalating noise as we add component after component to an already noisy system. In the excitement of our new acquisition we rarely notice that the new hard drive sounds like a movie of a 747 with a herd of buffalo running down the aisle. I would like my instruments to work, but to do so quietly! Manufacturers would like us to think that no one is aware or cares about noise. On the contrary, we do, but usually too late in the purchase.



As revenge for writing this article they have seated me between the rear engines of a Boeing 737. The three hour experience has given me a new prospective on noise. Who says that the manufacturers don't stick together. I will now not complain about my Mega ST for at least one month, until I can hear again.



All work in this article was done on a *Mega ST4*, *520 ST* (with 1 meg upgrade), *Atari SLM804* Laser printer and Migraph's hand scanner. Programs used include *Touchup, Degas, Snap shot,* and *Publisher ST.* Cartoon artwork by Lorrie Devirian.

DON'T PANIC

A Buyer's Guide to the Lynx -- Yet Another View

By George Hulseman

The Lynx Move. My decision to buy a Lynx Portable Entertainment System was the result of painstaking and meticulous scrutiny of such variables as the current state of the video game market, my family's entertainment needs, and my current financial situation. This was no spontaneous move by any means.

At least, that's what I told my wife. My wife, of course, is quite familiar with everything Atari-related due to my constant and unsolicited ramblings about the company and its complete lack of ability in marketing. She is also well versed on what a Lynx actually is and why it is so much better than Nintendo. More on that later.

My wife is great by the way. She had already accepted the fact that roughly 50 percent of my income goes to an incompetent company. She simply shrugged her shoulders and rolled her eyes at the prospect of getting yet another video game system. Step two done. Now all I had to do was find out where to get one. No problem, right?

Stalking The Lynx. I called an Atari computer dealer. A logical approach, but nothing doing. The dealers are getting shafted in this deal. The guy I talked to could barely contain himself when I asked him about it. Call the toy stores, he said. We won't be getting the Lynx anytime soon.

So I called a nationally known toy store that shall remain nameless for legal reasons. Since I live on the Eastern Shore of Maryland (What? Atari makes computers?) I knew I would probably end up having to drive a phenomenal distance to get the Lynx system. The woman at the toy store asked me what a Lynx was. I told her it was like the Game Boy except made by Atari. Her response was threefold:

1) No, we don't have that,
2) We probably won't be getting that anytime soon, and
3) But we do have the Game Boy.

So I scratched my head. Surely, I thought, someone must be selling these things. They were supposed to be out by Christmas.

The Genie Connection. My next step was a stroke of brilliance. To catch a worm you have to think like a bird. To find an Atari product you have to contact an Atari user (e.g. a bird brain). Since there is no such person on the Eastern Shore I let my fingers do the walking via Genie and soon had some hard answers to a popular question. After all, we are dealing with an Atari product here, and a recently-released one at that. I found that others had already walked this path I was on. You know, the one with the worms.

The answer was as unlikely as an Atari dealer on the Eastern Shore. Wandering around the catacombs of Genie, I learned that Sears is selling the Lynx even though it's not listed in their Spring catalog. You have to know the catalog number ahead of time to order it because, apparently, Sears doesn't even know it has it. I could talk about the irony of this, but I won't. It was about this time I began feeling insecure about life in general and it was with a sense of impending doom and great apprehension that I wrote down the catalog number.

When I told my wife that Sears had Lynxes she offered her Sears credit card. My wife, by the way, is great. She even offered to order it for me. And she did. Along with about $300 worth of Sears merchandise for herself.

Just like the people said on Genie, the Sears phone teller didn't know anything about the Lynx. But when she punched in the magic catalog number (049GY75425) into her computer it listed a "personal game system" for $159.00. That must be it. She even spouted off some of the names of game cartridges available for the Lynx. I knew I was in business.

The Long-Awaited Moment: Send It Back. When the Lynx came a few days later I was like a little kid again. Actually, I've never stopped being a kid. I tore open the box with great excitement, read the instructions and plugged the cute little cartridge in. Then I pushed the on button. I pushed the on button again. Then I pushed the on button again. I suddenly received a flashback of buying an 800 XL years ago (from Sears). It didn't work either. Then I thought back to last year when I purchased my ST. I brought it home

after a five-hour trip to and from Fairfax, Virginia and hooked it up. Despite having been tested out at the store, the built in disk drive would not write to disk. You can guess the rest. Now here comes the Lynx.

By this time, I was starting to get paranoid and neurotic. I kept looking over my shoulder expecting the Tramiels to spring a surprise announcement that they were selling Atari to Nintendo so they could purchase Commodore back.

After fiddling around with the Lynx for awhile I tried the on button again. This time I held the button down and kept it down. Soon the Epyx logo appeared followed by a menu for *California Games*. I was impressed. The graphics and sound were fantastic. It was a bit difficult to play though because one of my hands was permanently occupied in holding the on button down. Very awkward indeed.

So back in the box it went (Deja Vu, Frank?). I called Atari and asked one of their helpful people if this was a common problem. No, the lady I talked to had never heard of anything like this. She suggested I send it back to Sears or even to Atari for replacement. I opted for Sears.

Days went by. In the meantime, I lost my wife's Sears card which was probably a good thing. Finally, a package came. I was almost sure this would be a working model and, sure enough, it was. I pushed the on button and took my finger off. The Epyx logo appeared. Then the menu for *California Games*. At long last, it just doesn't get any better than this.

The Verdict. So what's the Lynx like? Just like they say. It beats the pants off of the Game Boy. No kid in his right mind would ever choose the latter over the former after seeing a comparison between the two. The *California Games* cartridge included with the game system is a great package. Any one of the four games could probably be sold separately (with the possible exception of Foot Bag). The graphics and sound are extraordinary. I'm convinced that this system may ultimately help bring the Atari Corporation from its video game doldrums and retake the lead from Nintendo. The system is that good.

But, alas, there is the question of marketing. The Atari people haven't exactly shined in this category in recent years. They missed the boat last Christmas and they probably should get started on next Christmas now. They need to get this system out of the warehouse and into the stores. They need to get it in the Sears catalog. They need to advertise.

It looks to me like portable video games will be the wave of the future. Let's face it. The sophisticated game machine for the home is a home computer. But the portable game machine can be played anywhere. In the car. On the plane. Some Lynxes are being used in doctor's offices and hospitals to give patients something to do while they pine away in the waiting rooms. Atari has seen the future and it is now. The upper hand is theirs, somehow, and they need to go with it.

If Atari is successful in marketing the Lynx, maybe it can apply its newfound tactics to the home computer division. We all know what great computers they are. Even my wife knows that. Hopefully, Atari will let the rest of the world know.

[I recently purchased the Lynx and I agree wholeheartedly--a super game machine! The animated graphics in Blue Lightning are better than I have seen anywhere. The kids love it and use it continuously. Of course, they quickly beat my scores in everything! It may very well represent the next generation of home game machines. -JW]

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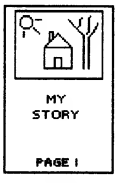

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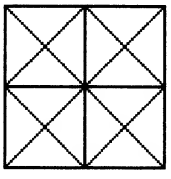

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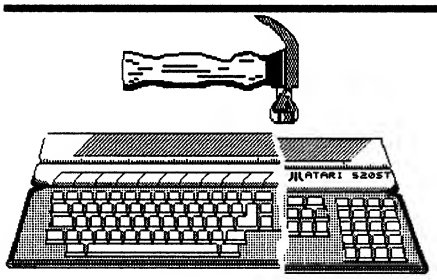


Fixing Things That Ain't Broke

...Speed Up Your ST and Let's Boogie!

By now almost every Atari ST user knows what *Turbo ST* is. A few years ago, Mr. Wayne Buckholdt discovered that the system routines performing screen operations on the ST are, to put it mildly, far from efficient and decided to write his own. His program replacing the original routines with improved ones is called *Turbo ST*.

Now, history repeats itself. Last year Mr. Darek Mihocka suspected that the *Turbo ST* routines could be improved upon, so he decided to write his own. Thus, *Quick ST* was born.

If you do not feel like reading all I have to say on these two programs, skip the rest of this article and jump straight to the summary table on the next page. If, however, you want more detail, and you are not afraid to acquire some bad habits in your English, then get yourself a beer (or coffee, or brandy, or carrot juice) and read on.

Cleaner, Leaner and Meaner

About two months ago Mr. Buckholdt kindly sent me an update of *Turbo ST*--Version 1.8. Since then, I have been using it for about 12 hours a day on my STs at work and at home without any compatibility problems. The program is very well-behaved and the improvement in the speed of screen operations ranges from noticeable to impressive.

Just two weeks ago I received *Quick ST II*, version 2.0 of Mr. Mihocka's program, so I could finally start working on the long promised head-to-head comparison of both accelerators.

By a coincidence, at the same time one of the users of my *El_Cal* math program sent in a problem report: *El_Cal* would not draw plots under *Quick ST*, although without it (or under *Turbo ST*) everything worked just fine. Well, as soon as I could re-create the problem (i.e. in about five minutes), I sent a CompuServe message to Mr. Mihocka, and the very next day the pre-release version of *Quick ST 2.1* was in my electronic mailbox, with the reported problem fixed. (To save you details, it looks like I am doing things in the reverse Polish way, albeit GEM says it is kosher and the ladies are not complaining, thank you.)

I am going to use the *Quick ST 2.1* in this comparison, as in mid-May it replaced Version 2.0 (with significant improvements in speed and compatibility). On the *Turbo* side, I will also stick to the newest version 1.8 (also somewhat improved, though 1.6 was already OK). Before that, however, some words of elementary introduction about these programs.

How Can We Speedup GEM??

More knowledgeable readers will, I hope, forgive me if I am too elementary in this section, but I have to put some things straight for those who may be new to the wonderful world of ST computing.

Most of the graphic operations we see in programs using GEM are not, in fact, executed by the code contained in those programs. The GEM toolbox libraries do most of the work. They sit quietly in the background until a program asks them to do something like, for example, "Please, draw me a nice box with rounded corners, filled with polka dots, with such and such size and at such and such location, and move it, mister!"

The (by far) most common graphic operation in most applications is text display. Yes, our machine treats text as a special kind of graphics, and a large part of the screen routines deal with various aspects of the text output.

The GEM run-time toolbox comes on the read-only memory chips (ROMs) installed in our machines. This makes other programs smaller, easier to write, and more uniform in graphic output and in user interface. On the other hand, Digital Research Inc., who wrote the original Version 1.0 of GEM, only provided a cheap port from the Intel version for the Atari ST; it is much slower than it should be.

The subsequent updates of the Atari ST operating system, Versions 1.2 (Mega), 1.4 (Rainbow) and 1.6 (STe) have introduced some improvements in the speed of graphic output, but nothing very spectacular. The hardware screen accelerator, a.k.a. "blitter chip" installed in the Mega ST series does not help much either. (One may suspect Commodore planted a mole in the Atari development team!)

An obvious way to improve the performance is not to make any use of the built-in GEM routines, but to include their equivalents into the application program itself. This is what we see in *Tempus,* the fastest text editor bar none.

Don't misunderstand me; the graphic output routines in *Tempus* are so fast not because of *where* they are located (in the program itself instead of a memory-resident library), but because of *how* they are written. (Well, the toolbox routines may have to be a little slower because they are more general.)

The second way is more ambitious: to write a memory-resident graphic output toolbox, which will intercept all, or at least some, of these "Please do..." requests from other programs, and perform the requested operations. Note that such a toolbox has to be not only fast (this is why we wrote it in the first place), it also has to behave exactly the way the original one does (except for speed), because those other programs *do not even know* they are no longer talking to GEM! Thus, the job is tougher but the rewards are greater since all programs will now benefit from the improved performance.

Both Mr. "Turbo" Buckholdt and Mr. "Quick" Mihocka have chosen the second approach. Their programs do nothing by themselves, but they significantly improve the screen speed of most of the other ST software. If you have been thinking about a blitter chip upgrade, forget it. *Quick ST* and *Turbo ST* will do the same job, but much better and much cheaper. They will even speed up a machine equipped with a blitter. And if you want to have a comparison between these two programs, read on.

Installation

Each program comes in various flavors, customized for the monitor you use. This is understandable: the routines handling color output may, in many places, differ from those for monochrome. Both authors decided that including both color and monochrome into one program would be a waste of space. I feel this was a reasonable choice.

Turbo ST comes both as an accessory and as an auto program. The auto program version should be placed in the \AUTO\ folder on your boot disk. When the computer boots up, the program installs itself in memory. That's all there is to it. You will know it is there only because less memory becomes available for other programs (how much less will be discussed later) and, of course, because your screen operations become so much snappier.

The accessory version is placed in the root directory of the boot disk (where the other accessories are). When you boot up, the accessory installs itself, giving you one more clue (as compared to the previous case) that something has happened. An entry in the **Desk** menu in the top-left of your desktop allows you to disable the *Turbo ST* or enable it again. This would be helpful in case of any compatibility problems. No, *Turbo ST 1.8* never has given me any. Disabling and re-enabling comes in handy when you want to see the difference, but it costs you one of the six available accessory slots. Anyway, with all the options available, you can choose your own preference.

Mr. Mihocka is quite confident of the compatibility of *Quick ST* since he decided to provide only the auto program versions of his accelerator. With Version 2.1 I do not expect any problems, so I do not miss the accessory version.

Both programs also provide support for the large screen Moniterm (one of these days I will be able to get one). *Turbo ST* includes separate auto and accessory versions (which brings the total up to six!), while *Quick ST* includes Moniterm support in the mono version.

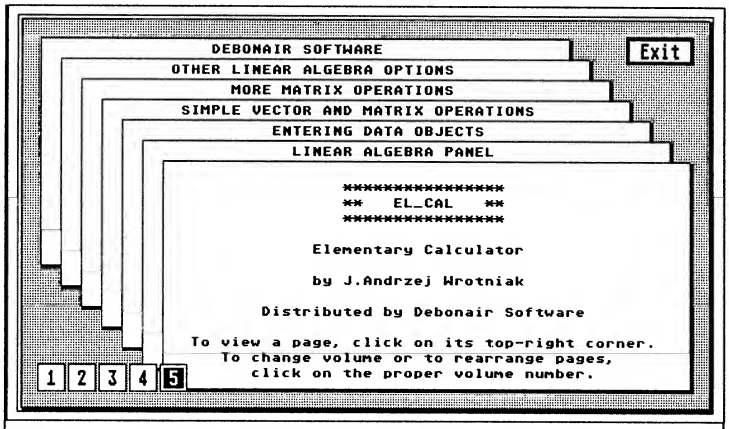
A Comparison of Turbo ST and Quick ST II Performance and Features

Features\Product	*Turbo ST*	*Quick ST II*
Version	1.8	2.1
Author	Wayne Buckholdt	Darek Mihocka
Distribution	SofTrek P.O.Box 5257 Winter Park, FL 32793 (407) 657-4611	Branch Always Software Box 2624, Station B, Kitchener, Ontario N2H 6N2 (519) 570-4340
Price	$50	$20 (+$3 shipping)
Updates	$5	$3
Compatibility problems	None discovered	None discovered
Speed gain	Dramatic, generally as good as *Quick ST*	Dramatic, generally as good as *Turbo ST*
Speed advantage over competition	*Word Writer* scrolls 1.16 times faster	Draws small monochrome text 4.8 times faster
Extra features	None	Custom desktop pattern, picture on desktop
Documentation	OK	OK
Memory usage	50k (auto program) 54k (accessory)	24k (auto program) 56k (with a picture)
Recommendations	If you have it, keep it; upgrade to new version	Buy it--if you do not have *Turbo ST* already

Performance

Quick ST and *Turbo ST* make screen operations very much faster. And this improvement in performance is very similar for both programs, with very few exceptions. The results reported here have been obtained under TOS 1.4 (no blitter chip) on a monochrome monitor, but I have also re-run most of the tests under TOS 1.0 and in color (all possible combinations). In most cases the TOS/monitor differences were not significant, so let me just keep them out of the way, with a few exceptions explicitly stated below.

Mr. Mihocka is the author of *Quick Index*, a program that gained popularity as the standard benchmark for the ST. Four of the speed tests in *Quick Index* deal with screen output: two with standard-size text, one with text scrolling, and one with drawing dialog boxes. The performance of both screen accelerators measured under TOS 1.0 and 1.4 (without a blitter chip) with *Quick Index* was very similar, with differences not exceeding two percent. Thus, for example, dialog box redrawing became faster by a factor of 2.5, while the TOS string output--by a factor of 13 (wow!) The screen scroll improved by a factor of 1.8 (TOS 1.0) or 1.3 (TOS 1.4). This means that Atari introduced an improvement here in the newer system, thus catching up a little bit with the independents.



This is the "medium" monochrome font, so nicely speeded up by the *Quick ST*. Not so many programs make use of it -- many users may not miss this feature in the *Turbo ST*.

The windowed text output is usually performed by a call to the graphic text routine (known in C as v_gtext). This routine knows how to draw text with various attributes (**bold**, *italic*, underlined, etc.). To measure the performance of both programs in v_gtext, I used (again!) Mr. Mihocka's benchmarking program, BMVGTEFF under TOS 1.4. Once again, the speed increase is dramatic: by a factor of about 8 (for plain text with no attributes). There was only a five percent difference between the competing programs: if drawing a given text under TOS 1.4 takes 100 milliseconds, it will take 12.12 milliseconds with *Turbo ST*, and 12.06 milliseconds with *Quick ST*. You can see for yourself how insignificant the differences are!

Most of the text in your word processor window carries no attributes, so I would be perfectly happy if the authors had left those alone. But no, these guys are quite ambitious. Bold text is speeded up by a factor of 13 by *Turbo ST* and by a factor of 10 by *Quick ST*. On the other hand, *Turbo ST* does not speed up text with other attributes, while *Quick ST* does, by a factor ranging from six to eight, depending on the case.

Gentlemen, give me a break! In average use, it is plain text that counts so we can safely ignore the slight advantage of *Turbo ST* in bold, and the pronounced one of *Quick ST* in all other attribute handling. I think it may not be worth wasting your time, which could be better used to help me in investigating the *Donnerwetter ST* mystery!

To avoid being entirely dependent on Mr. Mihocka's tests, I also wrote a simple benchmarking program consisting of three parts. The first two open a window (20 by 40 characters) and fill it with graphic text. The difference between the two is that the first one uses the standard system font while the second uses the next smaller font size. A small surprise here: while *Quick ST* speeds up both fonts 5.6 times, *Turbo ST* achieves this gain only for the system font, leaving the smaller one unchanged.

The last omission may hurt some users while leaving others perfectly satisfied. Few programs (and mostly in their monochrome versions only) use smaller font sizes to any significant degree: *Word Perfect*, *NeoDesk* and *First Word Plus* have such options while my own *El_Cal* uses the smaller font in its online help (and you have to see how snappy it becomes with *Quick ST* installed!)

A technical remark: GEM draws text much faster if it starts at a "byte boundary" on screen. This means that for some window positions the benchmark could run much faster (and the speed increase due to both accelerators be less spectacular) than these results since my window was not byte-adjusted.

The third benchmark in my program was, again, a dialog box, but a really huge one, with about 200 different nested rectangles (buttons, panels and whatever else), some of them disabled, some hidden. (Yeah, I took this thing from *El_Cal* again, to save myself some work). The speed-up factor was 2.4 for *Quick ST* and 2.5 for *Turbo ST*--practically the same in both cases.

Back to Real Life

In real-life situations, when an application writes to the screen, the actual screen output is intermixed with

some other operations: a word processor may have to reformat each next line, a drawing program may have to compute the co-ordinates of points to be plotted, etc. Therefore, the actual speed increase you will see will be usually less significant than the figures reported above.

One of the most frequently performed graphic operations is the redrawing of the whole screen of text in a word processor. Therefore, I decided to add this into my set of benchmarks. I took the largest text file I have in *Word Writer* format (the newest version of the *El_Cal* user manual, 116k!) and scrolled through it from top to bottom by keeping the mouse button pressed on the scroll bar.

The process lasted 135 seconds under TOS 1.4, 70 seconds with *Turbo ST* and 81 seconds with *Quick ST*. This means the speed-up factor was 1.93 and 1.67, respectively--*Turbo ST* having a slight edge. The older *First Word V1.16* does a better job here. The corresponding time values were 98, 63 and 68 seconds, which gave *Turbo* a factor of 1.56 and *Quick ST*--1.44.

According to Mr. Mihocka, the difference between both word processors is caused by the fact that *First Word* draws a white filled rectangle before writing each line, while *Word Writer* draws a white filled polygon (which just happens to be a rectangle), and the latter is a much slower operation. Yes, we know that a four-sided polygon with all right angles is a rectangle, but GEM does not know it (and the *Word Writer* programmers did not bother to account for this inability). Oh, well.

If I am quoting all this technical detail, it is not to put you to sleep, but to illustrate the amount of research both authors had to undertake in order to make their programs worth our money.

All Other Things Equal...

I am sure that the authors of both programs, justly proud of their work, could point out some areas where *Turbo ST* or *Quick ST* is faster than the competition. It is, however, mostly a matter of professional pride. With very few exceptions, listed above, for all practical purposes both accelerators provide a very similar degree of improvement, and a very impressive one, too.

Therefore, factors other than speed come into play as decisive in making your choice. Compatibility would be the most important one. But, as I stated before, *Turbo ST 1.8* and *Quick ST 2.1* are as clean as I could wish. (And, believe me, I am a picky person! My fellow programmer, Ms. Dorothy Brumleve of the Kid Stuff fame said once that she likes reading this column--as long as I do not review her programs!)

When somebody writes a program using GEM graphic operations, there are zillions of possible combinations of calls to the graphic toolbox, and as long as things appear on screen the way the programmer wanted them to appear, everything is fine, whether or not we like the way the programmer is using GEM.

A replacement toolbox has to handle all those zillions of combinations *exactly* the same way GEM does, only faster. It is not so difficult to provide compatibility with *most* of the usages, but it is very difficult to provide compatibility with *all* of them.

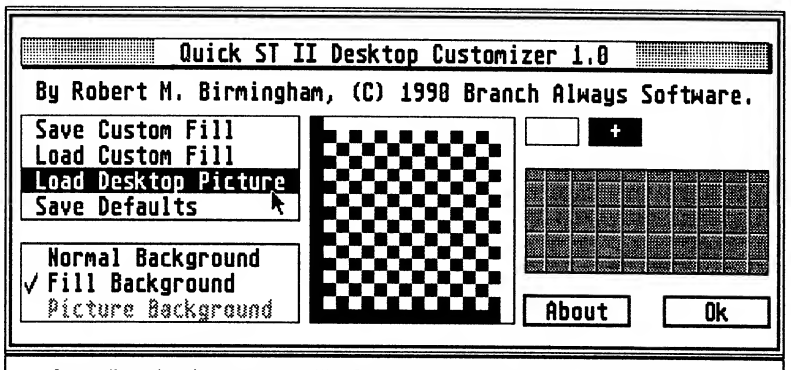
Once again, Mr. Buckholdt and Mr. Mihocka have done an admirable job here. This has not always been the case. The old versions of both programs showed some problems. For example, early *Turbo* would draw *small* monochrome text in *large* overlapping characters, while *Quick 1.5* would mess up my Prospero editor screen. Now, however, both programs are in their mature age. If you have an older version of either, you will be very happy upgrading to the newest one.

Size and Extra Goodies

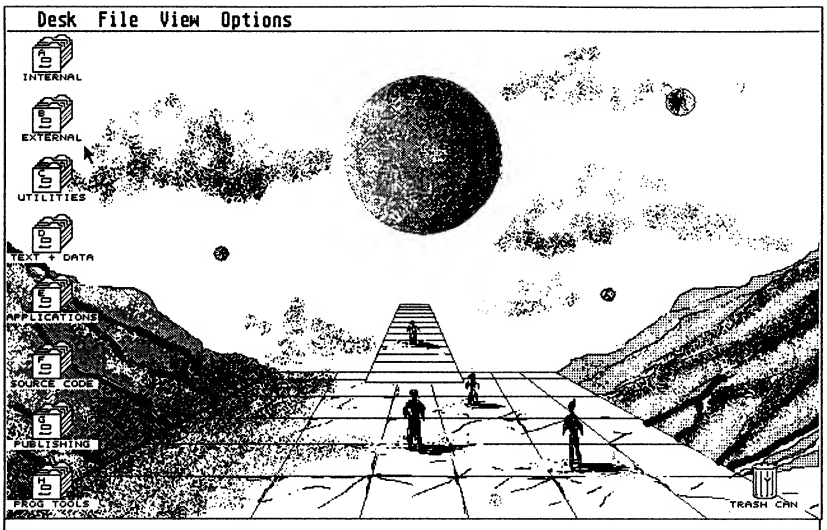
Both programs are memory-resident: whatever memory they use becomes unavailable for any other programs. If you have a Mega 4, this is not an issue, but if you are running a 520ST (or even a 1-MB machine), then each 10k you lose is quite painful.

From this angle, *Quick ST* looks better. When loaded, it takes just 24k of your precious RAM, while *Turbo ST* takes 50k (auto program) or 54k (accessory version). Putting aside the question of how Mr. Mihocka squeezed all this into such a small space, the extra 20k will certainly be appreciated by all of us with one-megabyte or smaller machines.

Quick ST also has two small but nice extra features built in. First, it can replace the standard grey GEM desktop pattern with any pattern you may want. A



A small customizer comes with *Quick ST*, allowing you to install your own desktop pattern or picture. Next time you run *Quick ST*, your desktop will look like nobody else's.



This is the usual GEM desktop with one of my favorite pictures installed in *Quick ST*. (Picture by Adam Kniaginin from Warsaw.)

small customizer (enclosed on the program disk) can be used to design your own patterns. Not very important, but nice.

Second, *Quick ST* can replace the GEM desktop with a *Degas* picture of your choice. This, of course, would cost you an extra 32k of memory, but if you are willing to sacrifice it, you may make your desktop look unlike anybody else's.

What is especially nice, the new desktop (user-defined pattern or a picture) will show up not only when you are at the GEM desktop level (i.e. between running some applications and while loading them)--it will also replace the grey screen *inside* other programs. Remember *Easel*, a program which could do just that and nothing else? It sold for $20 and this is what *Quick ST* sells for. Oh, yes, Mr. Mihocka throws in some other goodies on the disk, including *Quick Index* and *Quick View*--a text and picture viewing utility.

Ups and Downs of the Free Market

We have now arrived at the bottom line: the price. My main objection against *Turbo ST*, at least from the point when it started behaving like Mother Teresa, was its price. This can be a highly personal issue, but I think $50 is a bit too steep. You can buy a word processor for this money, or a desktop publishing program for just some more. And this is not the case when the development costs are spread over a very small market niche. I think *Turbo* is over priced. Ours is, however (as the *Turbo* publishers pointed out in their answer to my original review two years ago) a free market system, and as long as there are people willing to pay the price, everything is OK.

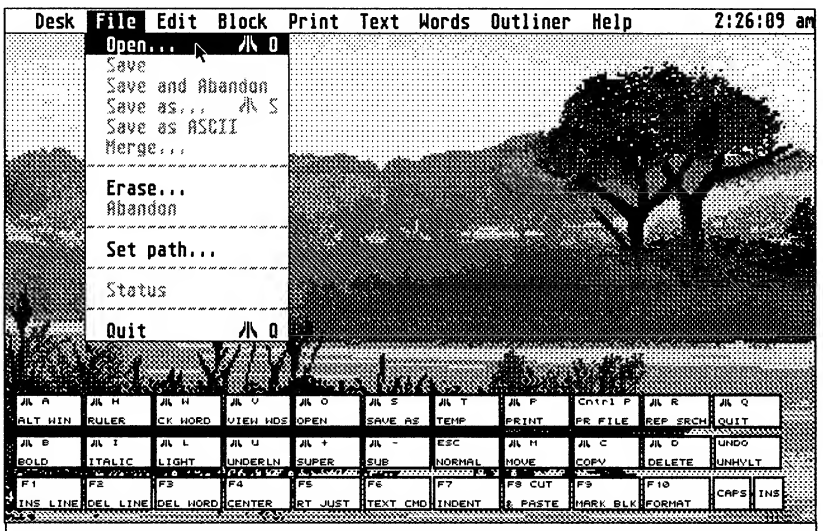
Welcome to the other side of the free market. Here comes this guy from Canada and, without even shaking the snow off his parka, starts selling a similar program for $20! (The original version of *Quick ST* and versions up to 1.8 were shareware. They are no longer supported. If you have one, go and get *Quick ST 2.1*--it is better-behaved and significantly faster, too). Imagine what will happen now.

If you have *Turbo ST* and if you can live with 20k less memory in your system, then, I think, you do not need to buy *Quick ST* (in case you have an older version, $5 will buy you an update to the latest one and you will be just fine). If, however, you do not have *Turbo ST* yet, then *Quick ST* from Branch Always Software seems to be a better choice, and not only because of the lower price.

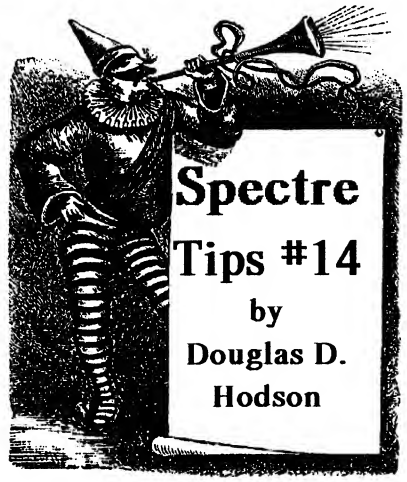
Free market, as cruel as it can sometimes be, has its advantages. Now I can expect the SofTrek people to strike back, not only by slashing the price of their product, but also by incorporating some new nice features into it. Wanna bet?

Monster – Not for TOS 1.0 !!

In the May issue I wrote about *Monster*, a Moniterm monitor emulator for the ST. I haven't mentioned (not knowing it at that time), that *Monster* will work only on STs equipped with TOS 1.2 or higher (this is true about the Moniterm monitors, too). Oops.



Would you ever think your old trusty *Word Writer* could look like this? (Maryann E.Raeder's picture translated into monochrome by *PicSwitch* 0.7)



Fixing NEC Mechanisms!

Drive Problems?

It was discovered early after the release of the GCR, that a couple of third party disk drive manufacturers produced drives that did not work so well in the arena of reading, writing and formatting Macintosh disks. One of the manufacturers is *Future Systems, Inc.*. The drives in question are the *GTS-100* and *GTS-100x* drives. Another drive that exhibits the same problems is the *Alternative* drive sold by several mail order companies.

If you are the owner of one of these drives, don't throw it out the window just yet. Read on... David Small and Doug Wheeler of *Gadgets by Small* have supplied a fix and placed it up on GEnie for several users. I have condensed their suggestions into one article. I hope this helps a number of users.

Of Drives

Most floppy disk drives are built from four basic parts. The parts are: power supply, disk drive cable (the cord that plugs into your ST), drive mechanism and lastly, the case to hold it all together. The only "important" difference between disk drives is the disk drive mechanism used and maybe the style and size of the case (if that's important to you). The problem is **not** with the design of the drive, or even its assembly, it's with the drive mechanism installed in them. All of these "problem" drives contain a NEC disk drive mechanism. The fix I'm passing along is for drives with a NEC mechanism only! It will **not work** with other brands of mechanisms.

If you have a third party drive other than the ones mentioned above, and are having problems reading and writing Mac disks, you may consider checking to see if the drive mechanism is a NEC. This information details the procedure for fixing NEC drive mechanisms models FD-1035, FD-1036 and FD-1037. To check your drive mechanism, you probably will have to open the case. If you are using an Atari SF314 or SF354 don't bother looking, they use something else.

The Problem

In this article, I don't want to imply that NEC drive mechanisms are problem prone. This is far from the truth. I own one of the *Alternative* drives myself and have found it to be far more reliable than the drive in my Mega. NEC drives are quite inexpensive and operate very quietly.

The problem with the NEC drives is that they contain a filter that is too sensitive for GCR data. Regular ST data gets right through, but GCR data is gradually degraded around tracks 60-79. The worst interference is right around tracks 64-68. This causes serious problems reading, writing and formatting disks!

What needs to be "fixed" is the filter circuit contained in the drive mechanism itself. This involves not only opening the disk drive case, but also the drive mechanism case. If you don't feel comfortable with a soldering iron, stop right here and find a friend who is. There is very little to modify, but you are playing with the guts of the drive. I say go for it; if you blow it, the worst would be the cost of a new drive mechanism. NEC drive mechanisms are very inexpensive. Many people have told me they have spotted them for as little as $39!

Required Parts for Repair

If you decide to "fix" your NEC mechanism, you will need a couple of basic tools and will probably have to purchase a couple of parts. The tools required are a soldering iron (low wattage so we don't melt the circuit board), a small flathead screw driver and a phillips screwdriver. The only part required is a 4700 picofarad ceramic capacitor. This can be purchased at any electronic supply store such as Radio Shack. Radio Shack calls them Hi-Q Ceramic Discs and they have a part number of 272-130. A package of 2 costs 49 cents. This fix only requires one. You will also need a short piece (2 inches is plenty) of thin wire.

Opening the Case(s)

I can't tell you how to open all the different third party disk drive cases. I haven't seen and certainly don't own them all! I can tell you that most of them come apart by removing a couple of screws located on the bottom of the case.

As for the NEC drive mechanism, I **can** tell you how to open it.

All three models we are discussing (FD-1035, FD-1036 and FD-1037) have cases that can cause fits! Before you start disassembling, disconnect the two connectors located in the back of the drive. The small connector has four wires attached; this is the power connector. The larger connector contains two rows of 17 pins each for a total of 34 pins. When you disconnect this one, make sure to keep track of which way it was plugged in. This **is** important!

Set the drive on a table with the top side up. There should be a screw located in the back right corner. Remove it, it holds the top of the drive case on. There are more screws on the bottom of the drive, leave them alone, we don't need to remove the bottom part of the case. The top part of the case can be somewhat tricky to remove. The best method is to use a small screwdriver and pry the top part of the case up over the clip located in the back right side of the drive. This should be fairly obvious (I'm sure you love that line). This will enable you to completely remove the top lid!

After the lid has been removed, you will see a large circuit board covering the rest of the internals of the drive. This circuit board contains the filtering circuit that requires our attention. The board can be *carefully* turned over to view all the components mounted. I say carefully because there are several thin ribbon cables connected to it. These can be damaged easily. You can disconnect the small ribbon cables but I would suggest not. I've had some trouble reconnecting them. (If it appears that I've encountered problems before, you're right!)

FD-1035 and FD-1036

Both of these models are essentially the same, and as it turns out, the fix is the same. Most *Future Systems* drives contain either one of these drives.

When viewing the circuit board, you will want to look for an inductor labeled L7 and a capacitor labeled C22. The inductor will be fairly large in comparison to the rest of the components but the capacitor is a surface mount component, so it will be **very** small. The capacitor and inductor will be close to each other as they are connected together by a trace on the circuit board.

After you locate the inductor, short it out using the piece of wire you should have on hand. Shorting in electronic terms means to connect the wire to both ends of the inductor so that the electrons (or current) can bypass the inductor and go through the wire.

Now locate the capacitor labeled C22 and connect the 4700 picofarad capacitor in parallel with it. Connecting in parallel means to connect each end of the 4700 picofarad capacitor to each end of the C22 capacitor.

FD-1037

You'll find this model inside the *Alternative* disk drive. The instructions for modifying this drive are essentially the same as for the models mentioned above except that the inductor is labeled L5 and the capacitor is labeled C20.

Final Notes

Be careful soldering to surface mounted components. If they are heated for too long, both ends of the component will disconnect from the circuit board! I had this happen to me where capacitor C20 is located. The capacitor simply fell off the board and I almost lost it (they are small!). I couldn't resolder it because soldering to a trace is almost impossible. As a result I left it out, reassembled the drive and tried it. It worked! In fact, it reads and writes Mac disks better than any other drive I've seen. It also mysteriously started reading some very old ST disks I couldn't read before! So if it should happen to you, don't sweat it, you may come out ahead.

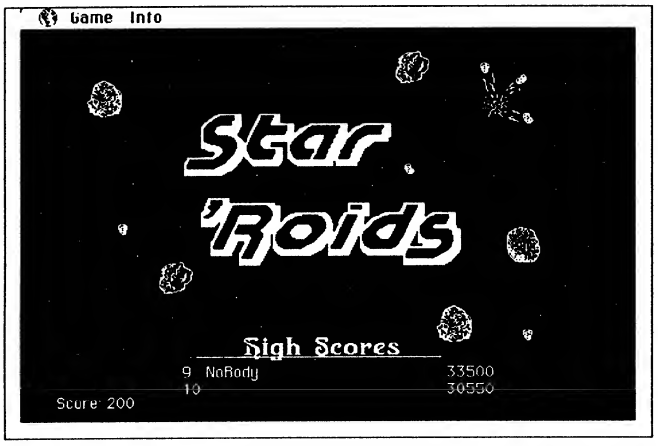
New Spectre CN Library Disks June 1990

by Jeff Greenblatt

This month, *Current Notes* is releasing five new PD and Shareware Spectre compatible (Version 2.65, 128K ROMs) library disks. For those of you using the Spectre with 64K ROMs, If you like and use any of the files, don't forget to make your shareware donation(s) to the author(s). Here is a rundown of what each of the new disks contain:

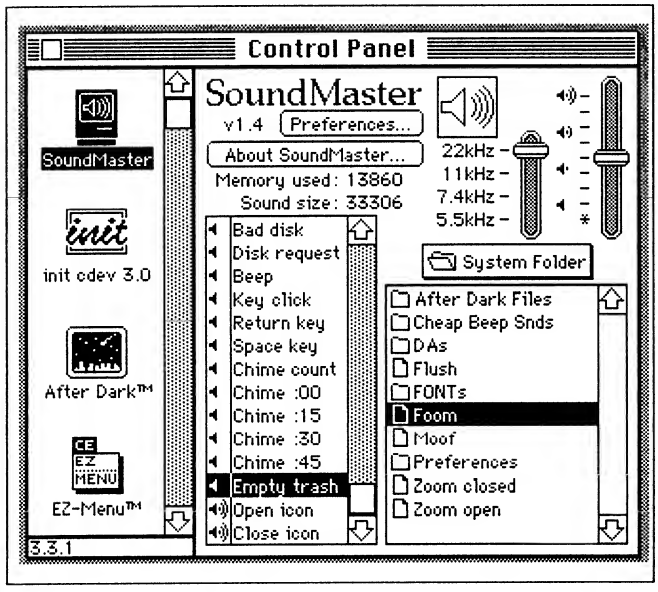
Disk 67, Utilities #10, contains some real neat new utilities. NeXT Folders--make your Mac folders like those brown accordion-style folders with little leather straps found on the NeXT computer. Fish! V2.0--turns your ordinary lifeless Mac display into an animated aquarium. Scroll2 2.0--a Control Panel/Startup document which gives you twice the scrolling power of the plain vanilla Apple scroll bar as well as the ability to customize the appearance of scroll bars. The Fabulous Text Sucking Leech--a utility that opens files and pulls text out of the data fork and puts it into a text file of your determination. and Cursor Animator 1.0 allows you to animate your cursor in a variety of different ways. Comes complete with 45 different cursors.

Disk S68, Games #9, contains four new and fun games. They are Pits & Stones (game of pure strategy, you against the computer), StarRoids 5.4.1 (with digital sound, similar to the Atari 8-bit Asteroids game.)

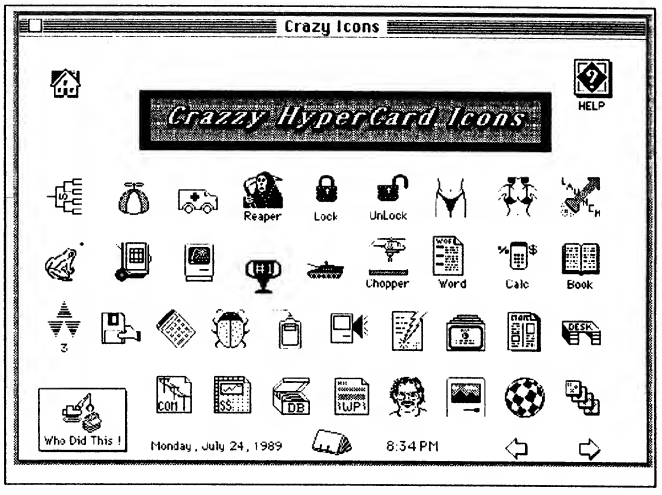


Stellar Imperium 1.01 (space simulation) and Dragon, V2.1 (a go-playing program which provides both human vs computer and human vs human playing board. This version is state-of-the-art in terms of go playing strength having achieved 2nd place in the recent international Computer Go tournament in Taiwan.

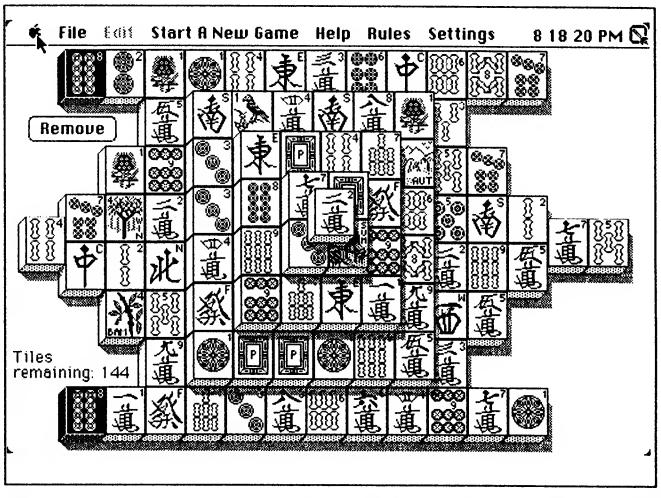
Disk S69, Sounds #6, contains the latest version of SoundMaster, version 1.4 with 16 new digitized sounds. SoundMaster installs code into your Mac during startup which can play sounds when various things happen. This version of SoundMaster now supports Finder sounds if used with Finder 6.0.4. The sound files are Bad Disk4, Disk Request, Flush, Foom, Intellivoice, Lots of Input!, Mac II Beep, Moof, Ooh, Input!, Orgasm, Sorry Dave, SpamSound, That's All Folks!, Type Key 2, and Zoom Open.



Disk S70D, HyperStacks #7, contains 9 new stacks for use with HyperCard or HyperDA. They are Astronomy, Clip Art Stack 2, Crazy Icons, Famous People Clip Art, Icon Transfer Stack, Memory Information, New ResCopy XCMD, and Self-Modifying Stack. Incidentally, the clip art in these stacks can be copied to the clip board and pasted into any other application document.



Disk S71D, Shanghai Demo. Contains a fully working demo version of Shanghai 2.0 complete with sound. This version appears to be complete except you can't save or load in a previous game.



See page 74 for a complete listing of the Current Notes Spectre PD/Shareware Library. All Spectre disks are $4.00 each plus $1 per every 6 disks for shipping and handling. Order from CN Library, 122 N. Johnson Rd, Sterling, VA 22170. (703) 450-4761.

Do you have a Syquest removable 44 Mb disk drive? Are you interested in obtaining the entire Spectre library on a single 44Mb Spectre-formatted cartridge for, perhaps, $150? Let us know.

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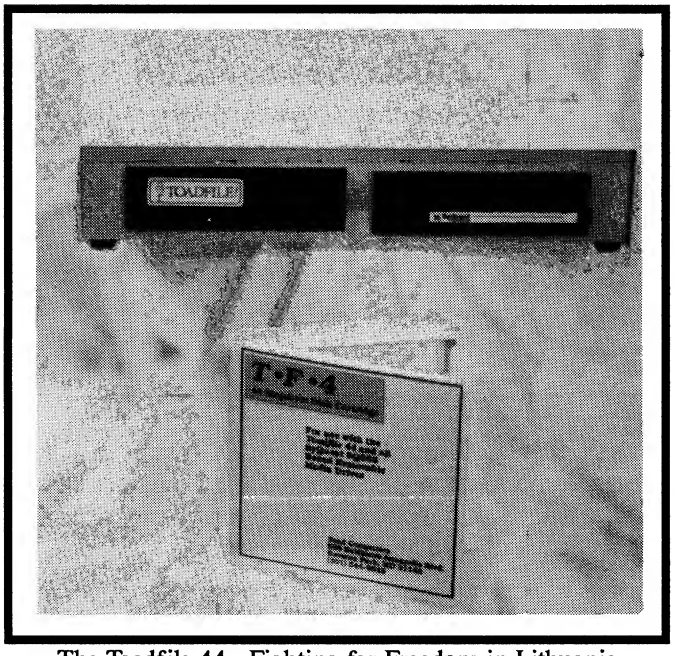

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Calamus Outline Art

The Vector Graphics Program

Review by Milt Creighton

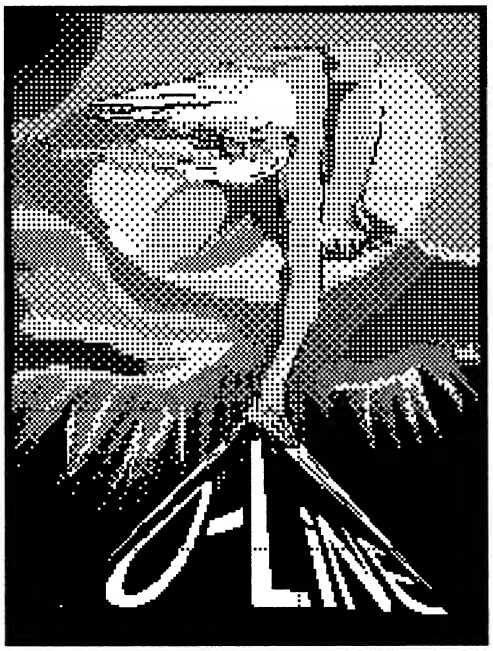
Outline Art from Ditek International is just a bit more than an add-on module for *Calamus*, the most powerful of the ST desktop publishing programs. In addition, ISD Marketing (the Canadian company that imports both programs and modifies them for the English-speaking market) has included their own conversion program for converting the output of *Outline Art* to postscript (PS) or encapsulated postscript (EPS) format for use in other applications. The entire package retails for $289.95.

If you are going to spend that kind of money for a graphics package, be sure you know what you are buying. There is a steep learning curve with *Outline Art* and while the manual is tons better than the original *Calamus* manual, there is still a lot of material to plow through.

What Is It Anyway?

Outline Art is a vector graphics creation program. That makes it unique in the ST world. *Touch-Up* from Migraph, *Outline Art's* nearest competitor, produces raster graphic not vector graphic images. The difference is that raster images are bit-mapped--created by placing dots in matrices or patterns that produce the desired image. If the dot density is high, the image is sharp. Laser printers are capable of producing high density bit-mapped images of around 300 dots-per-inch (DPI) which is quite acceptable for most uses. At the professional end, linotype printers are capable of better than 2500 DPI. On the other hand, most 9-pin dot matrix printers have a 72 DPI graphics capability, though some can dither the dots to better effect. The differences are very apparent in image quality.

Raster or bit-mapped images are the most widely used images in ST drawing and desktop publishing programs so you might wonder why the arrival of *Outline Art* was so enthusiastically heralded. The reasons are both obvious and subtle. The more obvious advantages of *Outline Art* lie in the disadvantages inherent in raster graphics.



Bit-mapped images suffer greatly when they are re-sized. A scanner that produces a 300 DPI image will usually look quite good in its original state, but if you import it into a desktop publishing program you'll probably want to adjust its size to fit your composition. The trade-offs aren't always pleasant even when you can get around the aliasing effects.

If you enlarge the image, the spaces between the dots grow wider as it increases in size and the image becomes blurred. There is no practical way to increase the number of dots to maintain the sharpness. If the image is a letter, jaggies become more and more pronounced as the point size is increased. The same effect is observed in diagonal lines. Yes, you can use a high resolution pixel editor, but you'll grow old just trying to smooth one line of text. On the other hand, if you decrease the size of the image, there is no way to retain the original dot density and image information (and detail) is lost.

Vector graphics do not suffer from being resized because they are composed of arcs and lines instead of dots. If you enlarge the image, the arcs are simply drawn wider and the lines drawn longer. The reverse is true for scaled-down images. The effect is that the resolution is preserved no matter its magnification. One of the nicest benefits is that there are no jaggies--even under extreme magnification. It is, in effect, the same principle used in the scalable outline fonts found in high-end desktop publishing packages applied to graphic imgages.

Limitations

Still, there are limitations to this particular program and you should understand what they are before you decide to buy. *Outline Art* is not a true freehand drawing program. You won't easily draw complex shapes with it. But that isn't really what *Outline Art* is meant to do anyway. *Outline Art* was designed

for the manipulation of objects and letters. By that I mean you can do all sorts of wonderful things with a single character, a word, or even a line of text. You can use it to create impressive logos by projecting your name or the name of your firm on an object--such as a globe or a flag. You can vary the attributes of the letters, too. They can be condensed or widened, normal or italicized, or they can be outlined, shadowed, or gradient filled--or all three if you prefer. The effects you can create are limited only by your imagination and by the amount of time you are willing to spend learning the program.

As I said before, there is a steep learning curve with *Outline Art*. It's not just that the terminology is unfamiliar, so are the concepts. ISD claims that learning *Outline Art* is similar to learning *Calamus*, after an initial struggle you experience a sudden break-through; the features of the program become intuitive. I know this to be true of *Calamus*, but I must admit that I have yet to achieved it with *Outline Art*.

Program Structure

As for the structure of the program itself, it is much like *Calamus* in appearance. In fact, future versions of *Outline Art* will be incorporated as modules into professional versions of *Calamus*. The intent shows. There is no print function in *Outline Art*. In order to print what you have created, you must save your work in *Calamus* Vector Graphics (CVG) format and then import it into *Calamus* for printing. That might be sufficient for the German market where *Calamus* is apparently the dominant publishing program, but it would be an unacceptable solution for the North American market where the *Calamus* hold is not so commanding. That is why ISD included a conversion program with *Outline Art* to convert the vector images to two types of postscript format. Other desktop publishing programs such as *PageStream* can then import the graphics. Consequently, *Outline Art"s* appeal is not restricted to *Calamus* owners. Don't look to convert *Outline Art* to GEM metafiles, however. GEM can't handle bezier curves--a prime feature of *Outline Art*. You can't convert to any of the other graphics formats either, though you can use a screen grabber.

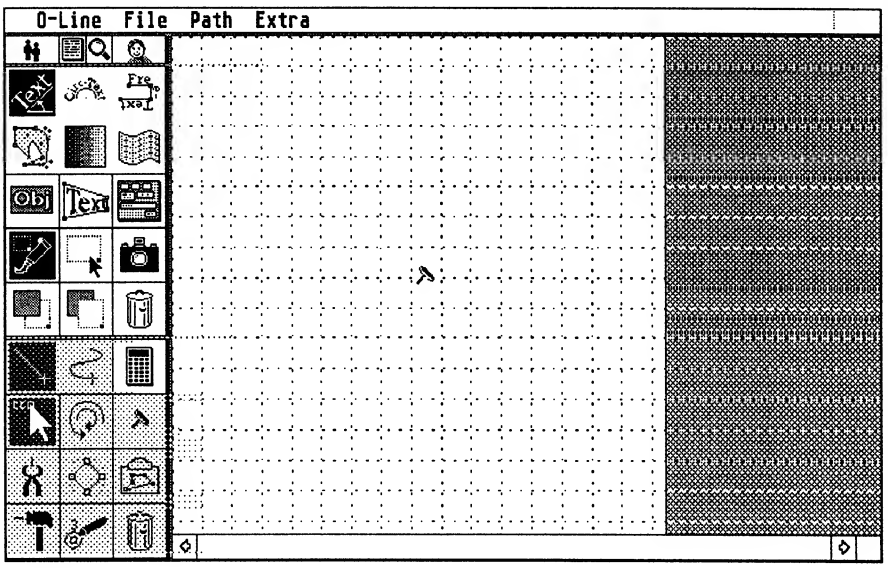
I successfully used the conversion program to convert a graphic image I created to Postscript format, loaded it into *PageStream*, re-sized it, and then printed it with *UltraScript*. It worked without incident. Of course, you can't view the image in *PageStream* (we don't have display Postscript yet) and you can't print it with a standard printer driver--you must use the postscript driver. Naturally, that is a long and expensive way around the bush. It's a lot easier and cheaper just to import the image into *Calamus* and print it directly, but then that's the point, isn't it?

The *Outline Art* comes on one non-copy protected, double-sided disk. It can be run from your hard disk without difficulty. The only installation required is setting the search paths for *Outline Art* graphics (*Outline Art* native format is different from CVG), *Calamus* Vector Graphics, fonts, and functions. Once you've done that, just save your default setting and you are ready to begin learning how to use this powerful program. My advice is to read through the first thirty or so pages of the manual (up to page 33) and then go directly to the tutorial and have some fun before trying to crank through the hard stuff.

Appearance and Functions

The *Outline Art* work page resembles *Calamus*, as you might expect. There is a gridded work area to the right center, an array of icons on the left (33 of them) running from top to bottom, and three drop-down menus at the top left. In addition, the x- and y-coordinates of the cursor are displayed in millimeters at the top right.

Some of the icons are the same as those found in *Calamus*, but there are a lot of new ones, too. Unlike *Calamus*, there aren't layer upon layer of icons lying in wait beneath the surface. What you see is what you get with the exception of the dialogue boxes some of the icons will summon. The icons themselves are mostly intuitive once you've learned the program, but they won't necessarily seem so at first.



The top-most row of icons control the screen display. You can zoom in progressively so that one pixel = 1/100 mm, which is equivalent to the resolution of a Linotype printer. Pixel-editing at that resolution is just staggering! While that feature won't be usable by everyone, it's nice to know that now you can create a text and graphics page that will print at the maximum resolution of a professional printer should you ever have the need. The other screen icons allow for zooming out in progressive steps, returning directly to the full view of the object, and defining an area to zoom into.

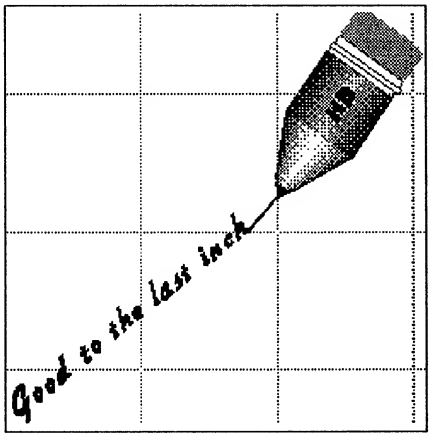
The next six icons comprise the heart of *Outline Art*. They represent the six types of objects that the program can create and manipulate. They include rotated text, circular text, path text, path, control path, and dynamic greyscale. These icons are followed by nine object editing functions that lie beneath them. These functions include add (create) object and select/move object icons familiar to *Calamus* users where they are used to add or select/move frames. They illustrate some of the differences in concept between *Calamus* and *Outline Art*. *Outline Art* is object-oriented where *Calamus* is frame-oriented.

Other icons permit moving an object between the background and the foreground, copying objects (the camera icon), and the familiar garbage can. The copy function is enhanced in *Outline Art* because copies can be altered from the original, moved a specified distance in the x- and y- planes, have their greyscale value changed or the object can be copied to the foreground or background. The other icons are for summoning the text object dialogue box, and projecting text upon an object.

The path editing functions include selecting elements/points, adding elements to the path, deleting elements, defining an alternate direction of a subpath, soothing the subpath, marking the corners, and defining the position of the reference pin (used with the ray function). Curiously, there is no method of joining two paths. There is also a garbage can icon here and you had better not get confused whether you are working with a path or an object since there are garbage can icons for each type. If you choose to throw away an object in a path garbage can (or vice versa) you can get *Outline Art* to bomb modestly (two bombs is all I've been able to get).

Text Effects

I have already stated that *Outline Art* is intended mainly for the creation of special effects using text. Let's examine what that means



for a moment. The three text objects (rotated text, circular text, and free-hand path text) all call forth the text dialogue box. The box will display (with the proper icon darkened) the object selected and permit you to enter the letter, word, or text string you wish to manipulate. You must also load a font. One of the truly nice features of *Outline Art* is that you are not restricted to the half-dozen fonts that come with the *Outline Art* disk. You can load in any *Calamus* font whether it is a *Calamus* distribution font, your own Compugraphic font (they bear serial numbers to prevent piracy and won't load unless they match your own version of either *Calamus* or *Outline Art*), a public domain or shareware font, or one you have created with the *Calamus Font Editor*.

You may select either the Auto Font size option (in which case the point-size of the font will be matched to the size of the frame you have drawn) or you may select a fixed font size and then select left, center, or right justification within your frame. The text can appear as an outline (with the thickness of the lines set at the time they are converted into CVG format) or with variable dynamic or static greyscales. You may select a static greyscale of 0-100% or a range of greyscales where the greyscale value changes. The character width may be changed to make wide or compressed characters, and the letter and word spacing can be specified. In addition, the Fixed Spacing option will distribute the letters evenly across the frame without taking into account differing character widths (non-proportional spacing). The characters can be rotated by a fixed angle or they can be italicised by an angle of your selection. If you select the Circular Text object, you can specify whether the test runs from left to right around the top of an arc that you specify or from right to left around the inside of an arc you may also specify.

You can also bring up a kerning function to adjust the spacing between any two letters. Just a word of caution, however. I found that kerning more than five or six letters will usually freeze the program. It may eventually recover from this condition--I noticed that does happen occasionally using other functions because of the complexity of the objects I was manipulating, but I wouldn't count on recovering from the kerning.

In like manner, you can define and manipulate paths and control paths, but my advice is to get a good handle on the other parts of the program before you try to tackle that. It can be confusing and frustrating. The functions are also very powerful. With them, you can define an area of nearly any shape and fill it with a chosen greyscale value or use the ray function to connect the reference pin to the path shape. You may define a grid upon which objects of all types can be projected or create a dynamic greyscale shape with varying greyscale values, band-widths, and even control the direction of the gradient.

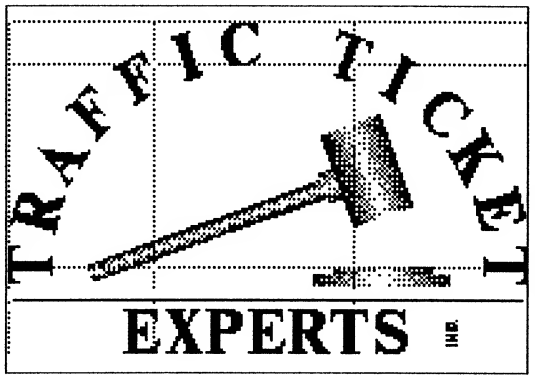
One of the more powerful tools of *Outline Art* is the Calculator function. Using the calculator, you may enter formulae (including trig-onometric functions) to define all sorts of complex shapes limited only by your imagination and your understanding of mathematics.

Recommendation

ISD is currently selling a hints/techniques book for making the most of *Calamus*, *Calamus Font Editor*, and *Outline Art*. If you are a registered owner of any or all of these programs--buy it. It will save you a lot of grief in getting into the more complex features of all three programs. (The Guide to Calamus Desktop Publishing,$35)

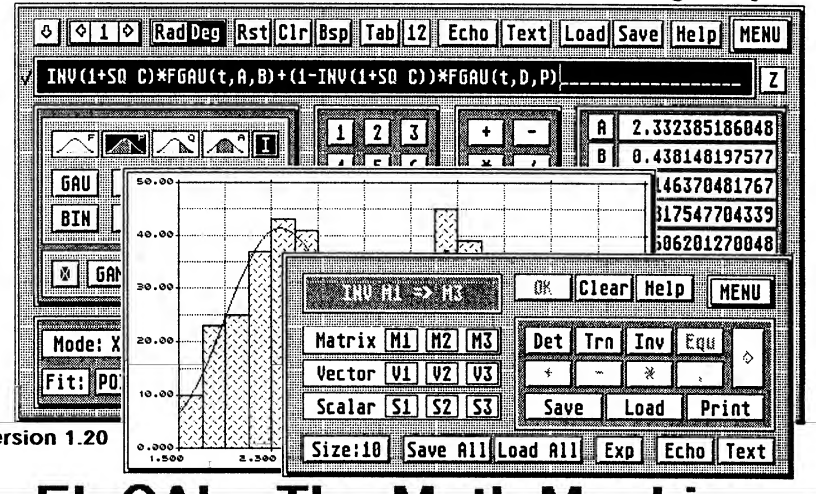
The Bottom Line:

As stated earlier, *Outline Art* is not a freehand graphics program. Instead, it is primarily intended for special-effect manipulation of characters, words and lines of text. *Outline Art* is a vector graphics program so its output will retain its resolution independent of its mag-nification. It has no independent print function as it is intended to be used with *Calamus* although the included conversion program can convert the output to postscript format. It is expensive if you just consider its price tag without regard to what it can do. The current version of the program is limited to objects of 100K for the benefit of 1040ST owners--though that penalizes those who own 2- and 4- megabyte machines somewhat. Future versions of *Outline Art* are intended to be used as modules within upgraded versions of *Calamus*. These versions will increase the allowable object size and add additional features such as auto-tracing (can't wait for that!!!).



The questions are, obviously, do you need all these features and, if so, should you buy it now? The answers are just as obvious. If you need the capabi-lity, buy *Outline Art*--nothing else even comes close. And you should buy now. ISD has a fine reputation for supporting its pro-ducts and upgrade paths (read price breaks) are promised for future versions. *Outline Art* is a professional-level graphics pro-gram. You don't need to be a trained graphics artist to use *Out-line Art*, but I suspect that if you aren't you probably won't ever make use of all the capabilities of the feature-laden program.

If you are a scientist or an engineer, or you are learning to be one, then we have something for you!



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Reviewed in *Current Notes* (May/89), *ST Informer* (Sept/89), *Atari Explorer* (Nov/89)

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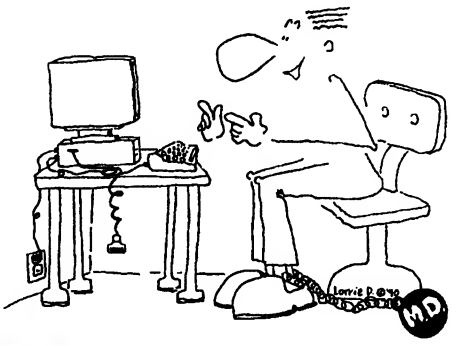
Migraph's Hand Scanner

They Deliver The Goods

by Pat. Raymore



The Migraph scanner comes combined with *Touch-Up*. For those unfamiliar with *Touch-Up*, it is a fine program for editing and manipulating IMG picture files. I will not go into the editing section of the program, but if you are a desktop publisher of any degree and have not seen this program at work you owe it to yourself to have a demonstration. Unlike the stand alone program, the combined *Touch-Up* and scanner come minus the little copy protection device that attaches to the printer port on the computer. Thank heavens.

What's with the Buttons

The scanner itself is a beautifully contoured hand piece with a dark see-through window on the top side of its leading edge. This window scratches easily so do be careful. When the scanner is operative, the window is lit to provide a view of exactly what is being scanned. On the left side of the scanner's handle there are three controls (fig.A). The flat fingernail-size button starts and stops the actual scan sequence. Just behind it is a small sliding button that sets the scanner for line art or the coarseness of the scan. Lastly, there is a small wheel for contrast sensitivity, which helps a lot should your picture be excessively dark or light.

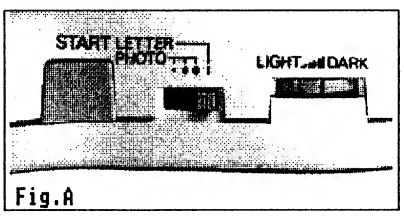


Fig.A

On the the right side, a small sliding button (fig.B) controls the resolution with options for 100, 200, 300, and 400 dots per inch (DPI). Setting up the scanner is simple enough. A little gray box plugs into the cartridge port of your computer (computer off, please) and, in turn, the scanner and power supply are plugged into the gray box. My, that was almost too easy! Now I intend only to review the section of *Touch-Up* that deals with scanning, as already mentioned, but the program is so well integrated that I beg your indulgence if you find me going astray.

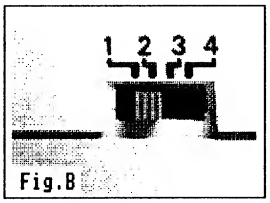


Fig.B

The Manual

The instructions for the scanner take up a fifth of the rather thick manual. Actually, the manual comes in two sections. Unfortunately, the scanner section contains material that must be sorted and some pages used to replace pages in the other section. Because of the method used to number the pages, I guarantee you will be confused. When all is in place, it is a fine manual. Because of its size, it is difficult to find a particular section without going to the index. Like many of my friends I am not that compulsive and end up rumbling through the pages, before finally heading for the index. I like my manual makers to assume that I am stupid, barely speak the language, and come from another country--no another planet. In all fairness, however, this happens to be one of the better manuals around for the ST.

Let's Scan

Now let's do a quick scan to see how this thing works. A brief glance at the manual tells you how. First you click on the scan icon. This brings up a whole new set of icons to choose from (upper left, fig.1). Set the

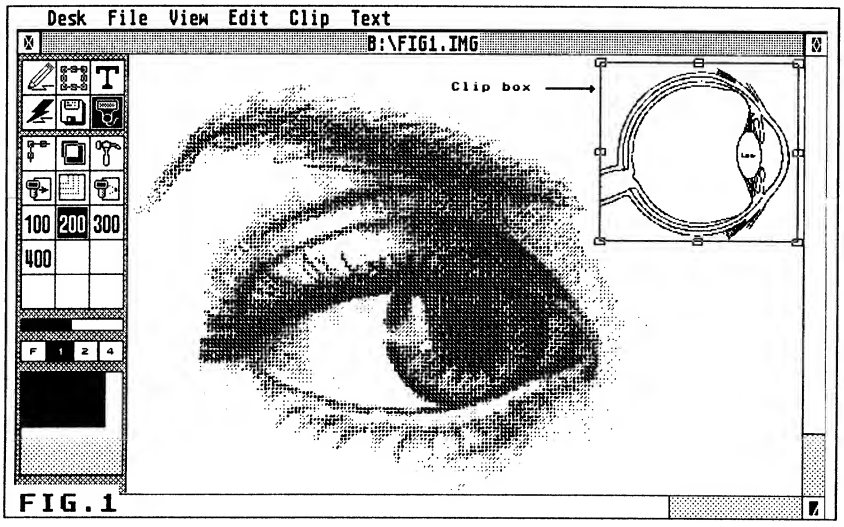


FIG.1

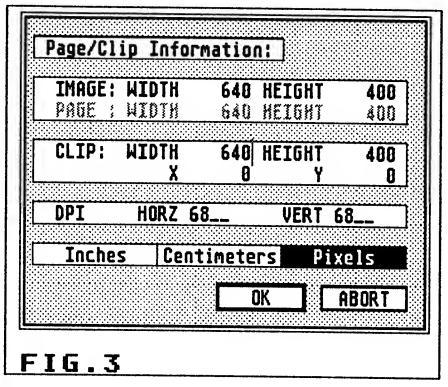


FIG.3

box can be set to an exact size via a dialog box (fig.3) or via the familiar click and drag maneuver. If you scan to the clip box the scanned image reacts with the image already on the screen in a manner predetermined via a dialog box (fig.4). The fact is that this little clip box is a powerful little tool which is generally used in *Touch-Up* to move things around, cut an image up, or to manipulate any part of your image. You can get some truly fantastic images this way, limited only by your imagination. You may save your image in just about any format you choose (fig.5), some of which are unfamiliar to me.

resolution to match that on the scanner. A click on the "scan to screen" icon brings up a warning that you are about to destroy the image presently on the screen. At your OK, the scanner's window lights up. While depressing the "start" scan button, you draw the scanner slowly over the material to be scanned. If you move too quickly, a red diode on the top of the scanner flickers indicating that either the scanner or the computer is having indigestion. In other words, you are botching it. Releasing the "Start" button ends the scan. It takes a few seconds for the image to appear on the screen. The manual walks you through it in 1, 2, 3 fashion. It even gives you a picture to scan. Yes, there is a learning curve, but it does not take long to get the hang of it. Line art is easier to scan and requires less trial and error.

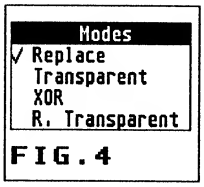


FIG.4

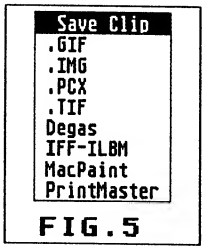


FIG.5

Some features within *Touch-Up* itself are particularly useful, including the ability to remove small stray dots (pixels) from your scanned image with one proverbial stroke of the pen. I also found being able to make lines in line art bolder useful and potentially creative. Yet an additional feature is the ability to view at different magnifications. The magnification settings are full, 1X, 2X, and 4X and are located in the lower left hand area of the screen (fig.1) The black rectangular box in the same area is used in moving the screen's view quickly to another part of your image. This is especially helpful when the image is a large one. I strongly recommend that you export images to a publishing program or *Easydraw* for printing. *Touch-Up* does make provision for printing images. You may access this provision within *Touch-Up* or as a separate program. It prints via *Epson* compatible printers and the drivers are included. Although this is not mentioned in the manual, you will have to extract the driver from the folder called GEMSYS and place it in the main directory pathway. If you do not, you get these funny little meaningless messages that pop up in dialog boxes. Why is it that these messages just don't say "go to page so and so" in your manual? To get the

Boring Details

The width (maximum of four inches) and height of your scan is set via a dialog box (fig.2). The more internal RAM you have and the lower your scanning resolution, the more options you have. Generally, *Mega ST* users will have no limitations, but if you have only one megabyte of RAM available, you may find your scan height limited when in the 300 and 400 DPI mode.

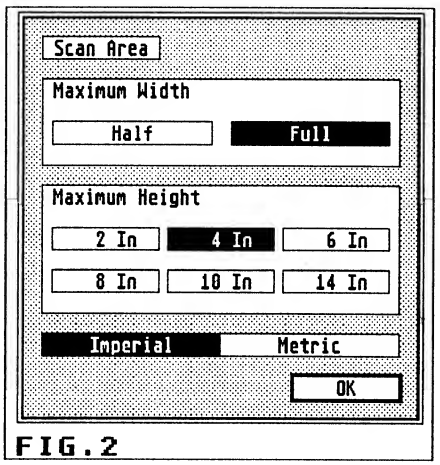


FIG.2

In addition to scanning to the full screen, you may scan to a specified section of the screen. This section is called a clip box (upper right, fig.1) and can be of any size or placed anywhere on the screen. The clip

best results, your scanning resolutions should match that of your output device (printer). For the *Atari SLM 804* that means 300 DPI. For a dot matrix of the 9 or 24 pin variety, your settings would be 100 and 200 DPI respectively. Also, if you don't want your images to look like they have small pox, make sure the resolution setting on the screen matches that set on the scanner.

Problems? Yes! Yes!

A major problem is the scanning of straight lines. No matter how steady your hand, it is nearly impossible to get them scanned into the computer as straight as they are. The manual recommends using the edge of a book as a guide. It helps, but is hardly enough. If you are scanning lots of straight lines, as in forms, then this device is not for you. There is a need here for some type of guide specifically for this scanner. It should not be too difficult to design.

Other problems? Yes. *Touch-Up* with scanner is capable of generating large files (larger than 60K). So? Well, the loading and saving of these files are exceptionally slow, even with a hard drive. This may not bother other people very much, but my middle name is impatience. I am not sure, but this doesn't seem to be the hardiest device made by mankind. Don't let your two-year-old vacuum the rug with it or drop it onto a hard surface. It is likely not to survive the mistreatment. Some of the parts, including the scanning underside, *are* made of soft plastic and I did not want to find out the consequences of damage to these parts. Just be as careful as you would be with any piece of electronic equipment.

A few other observations from using the scanner. There seems to be a "break-in period" when the scanner is brand new. Did someone say break? Heaven forbid! After a few hours of cumulative use, the scans appeared to be clearer (or was this my imagination?). Of course, this could be the result of learning to use it more efficiently. Definitely not my imagination was the slight increase in raggedness after repeated scans one after another.

Well, there it is folks. For the right price, put a little zap in your documents, a little spice in your rice. This little device fills a gap between the bottom of the line scanners and the fancy "leap every mountain in a single bound" type scanners at a high price. I cannot wait the 5-10 minutes that it takes for the less expensive scanners to scan an image. In addition, it takes too much to jury rig a printer to accept these scanners. By the time you add the cost of a printer and a program like *Touch-Up* to the cost of these inexpensive scanners you are in the vicinity of what it cost to buy *Touch-Up* and *Migraph's* scanner. Then again what's with the "pie in the sky" flat bed scanners costing four times as much? If you need the best, then that is, indeed, the choice for you. As for me, this little beauty works and works well.

All work in this article was done on a Mega ST4, 520 ST (with 1 meg upgrade), Atari SLM804 Laser printer and Migraph's hand scanner. Programs used included *Touch-Up, Degas, SnapShot,* and *Publisher ST.* Cartoon artwork by Lorrie Devirian.

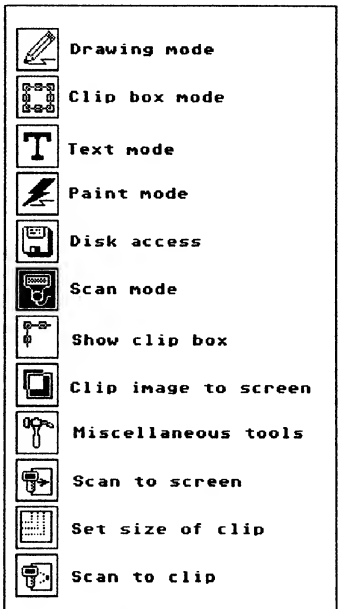


Fig.6

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Was it Miss Scarlet with a rope in the library?

An Electronic "Who Done It"

The classic boardgame comes to the ST!

Review by Bill Moes

A scream! ... something falls ... rapid footsteps and a door closing. There's been a murder! Could it have been done by Col. Mustard with a knife in the kitchen? Or ....

Clue Master Detective is a computer version of the classic board game. Unlike most board game conversions, this one works.

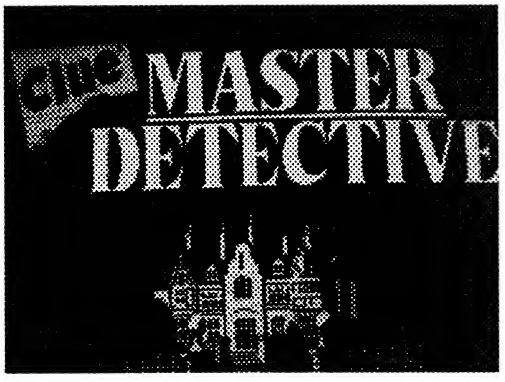
Off to the Races. Anyone familiar with that popular "Clue" board game (and isn't that everyone?) will feel reasonably comfortable with this ST game. Each player will choose to play as one of ten suspects. Other suspects may be played by other human players, computer opponents (set to one of three skill levels), or left neutral. At least three characters must be active.

Combining with the 10 suspects are 12 possible murder locations and eight possible weapons. To win the game, the correct suspect, location, and weapon must all be named.

The computer does the detail work of card shuffling and dealing, and selecting the murder details with those cards. Players travel around the game board after a computer-controlled dice roll, choosing to enter various rooms in the mansion of Mr. Boddy, the recently deceased.

Suggestions are made when entering rooms and, in this way, players gather the necessary information from other players. Through the process of elimination, it's possible to deduce those murder details.

Clue does a fine job of controlling the turns and prompting players. The game runs through a series of dialog boxes and GEM menus. The mouse is used throughout. The low resolution graphics of the game board are colorful. There are also some sound effects adding to the game.



In addition to making suggestions and noting some details of "cards" held by other players, it's possible to land on snooping spaces on the board. This offers each player the chance to see specific cards held by others. There are also secret, but well-marked, passages to quickly transport players across the board.

The Wages of Sin. Think you've collected all necessary evidence? Make the accusation. If you're right, you've won! Wrong? You're off the case.

Games can be saved and, with a printer attached, note sheets to record information or even a review of suggestions/accusations made may be printed. Sound effects may be turned off and it's possible to speed up a game by eliminating a close-up animated view of each player entering each location.

With *Clue Master Detective*, it's necessary to hold a hand over the screen, or ask others to turn their backs, when a player looks at another player's cards as they're shown on the monitor.

Clue Master Detective seems primarily designed for "Clue" fans who lack the extra two or more human opponents to play the actual board game. It succeeds very well. *Clue Master Detective* retains the lightly humorous approach to the classic challenges of the original "Clue," now about 45 years old.

The 18-page generic documentation does an adequate job of explaining the mechanics of the game and it offers a few suggestions for strategy.

The publisher, Virgin Mastertronic, also has ST versions of three other classic board games: *Scrabble*, *Monopoly*, and *Risk*.

Settling Up the Score. *Clue Master Detective* ($39.95) is a quality computer version of a classic family board game. The computer handles the detail work cleanly, leaving the player with the still-daunting task of naming the murderer, the weapon, and the location.

Come, Watson, come! The game is afoot!

[Virgin Mastertronic, 18001 Cowan St, Suite A, Irvine, CA 92714 (714) 833-8710]

PageStream in Color

"A Whole 'Nother Program"

By Steven Rudolph

Astonishing Work. I recently received a newsletter from Soft Logik announcing their upgrade for *PageStream*. This improved version (1.8) they said fixes most of the annoying bugs that kept *PageStream* (version 1.5) from being the first-rate program they had advertised. They were true to their word. *PageStream* is now one great program; it truly delivers power without price. And it does astonishing work for the rest of us who compute without hard drives, megabytes and laser printers.

This is much more than an update to version 1.5 and would have better been called 8.1; it's a "whole 'nother program." It looks the same as 1.5, but it works. Also, the new manual's format is a vast improvement over the original confusing attempt. Soft Logik, the maker of *PageStream* has always given me decent support and they have been supportive of our user group. *PageStream* is now a program worthy of our support.

The Name of the Game. Color is the name of the game and color graphics is the essence of the ST; that's why I bought an ST. However, color desktop publishing is purported to cost megabucks and be so esoteric that it is best left to the professionals. I think it should be easy, fun and not cost an arm and a leg.

After all, color is why the ST is one fun machine as compared to the Mac and its puny black-and-white display. Of course, you can do some truly professional work on the ST--keeping this secret from American computerdom seems to be the essence of Atari's domestic marketing strategy--but hard copy is almost universally black and white. I thought it would be great fun to generate color output so I bought a Canon PJ-1080A color inkjet printer. It's one fun printer capable of almost 80 dots per inch which puts it well outside the realm of professional peripherals.

DEGAS printer drivers for the Canon are generally available and I use them often for creating cards, maps, pictures and presentation work with my children's homework projects. These programs have resolutions that are well matched to the Canon. However, those professional programs with high-resolution capabilities have generally ignored the Canon. I don't blame the software companies; why bother to design a multi-color nonstandard driver for a printer with one-third the resolution needed to do a program justice.

Well, hidden away in *PageStream's* PSOTHER folder on the new program disk was a small file (743 bytes to be exact) that made my day. It is named PJ1080A.PRT. Could it be too good to be true? PJ1080A.PRT just couldn't be anything else but a printer driver for my Canon PJ-1080A color ink-jet printer. Well, it is and it isn't--it's a beta version--and it works, sort of.

WYSI(Not)WYG. Let me repeat, it's a beta version. As such, I was prepared to put up with some shortcomings and experience proved me right. First of all, it's WYSI(not)WYG. As compared to the images shown on the screen, the printed width is WYSIWYG but the printed height WYSI(1/2)WYG. Printed output is as wide as it shows on the screen but only half as tall. Fortunately, *PageStream* has the stuff to easily overcome this obstacle.

Second, although you can import a color graphic (I only have DEGAS-type programs), the images will only show up and print out in black and white; it doesn't import the color palate with the image. All is not black and white; anything created within *PageStream* itself, such as text, circles, boxes, fills, etc., can easily be colorized. Also, and unfortunately, you can't display the colors on the screen, so when you color an object it generally disappears from the screen.

Disappearing Colors. I haven't found a way to keep colors from disappearing from the screen. To get around this, I usually create everything in black and white and only specify the colors at the end just before printing.

However, overcoming the aspect-ratio imbalance is fairly easy. If you are just using text, just specify a font size that is twice as high as it is wide. For example, if you want to print correctly proportioned TYMES 24 point, an easy way is to specify 24pt, 48pt from the font dialog box. If you are only creating graphic images, you have to elongate the object using either the EDIT COORDINATES option or use the mouse by pulling the bottom of the object down so it is twice as long as it was originally.

Grouping. For multiple objects, *PageStream* has a lasso feature so the entire document can be selected and grouped into one grand object. Then it's easy to stretch it so the group is twice as long as it was originally keeping the width constant. Just remember to make sure that you compose the entire document in the upper half of the page allowing enough space to stretch it later.

Group Color Changes Don't Work. Once I grouped a series of objects and tried to change the color of the group. It didn't work. It seems that *PageStream* won't change the colors of a group of individual objects. I could only change the colors (fill pattern and line type for that matter) for individual objects. I constructed a heart-shaped object out of two circles and a triangle. After grouping the three objects into one, I couldn't fill or color the heart. After ungrouping, I filled each component object solid red and regrouped. I was then able to copy and paste the grouped object, retaining the fill and color. I wasn't, however, able to change the color of the group. Again, I had to ungroup and change each object individually. This really isn't much of an inconvenience but it would be nice if *PageStream* would allow group changes.

Compensating. Anyone familiar with how the ST handles objects will have no trouble manipulating the images to change color and compensate for the printing imbalance. These techniques should be quite basic for anyone who has used *PageStream* or any object-oriented graphics program. Judicious use of the group feature makes it easy to elongate graphic images uniformly so they print out in proper proportion.

PageStream comes with a file called COLOR.PAL (color pallet) which includes about 20 colors (more than enough for the Canon.) You can add and change the colors from a palette of several million zillion, great for professional separations but overkill for the Canon since it has a rather simple and limited method of printing colors and shades.

When printing with the Canon, specify "separable" rather than "mechanical" colors (it's the default, anyway). The Canon uses the Cyan-Magenta-Yellow subtractive-color-mixing method and makes all color and black images in one pass which speeds up printing and eliminates misalignment of colors. When printing, make sure that the NO SEPARATION option is selected from the printing dialog box. Both of these operations are well explained in the manual.

Test Document Worked. I prepared a little test document, employing graphics and text. Using *MAPS AND LEGENDS*, and *DEGAS*, I created a shape of the world. Although the world was originally multicolored and contained designs, it printed out black. The striped box was dark blue containing a red "Current Notes." I specified colors for the text and these did print out in color.

You specify the color you want from the COLOR option in the OBJECT menu. For objects, such as the striped box in the example, in OBJECT mode, you select the object by clicking the mouse and choosing the color from the menu. You cannot use this object method for coloring text; you do this in TEXT mode. First you highlight the text you want to color, by dragging the mouse and holding the left button down, and then choose a color from the menu. Changing text color is basically the same as changing fonts or other text attributes.

Just as an exercise, I imported a portion of the text to this article into *PageStream*, specified font sizes that would print properly, colorized it, and printed it on the Canon. It looks good to me. Not fantastic, but good.

Limitations. In working with the *PageStream*/Canon combo, I encountered a couple of limiting factors. First, don't use fonts smaller than 18 points (36 points tall on the screen) as they print out rough and are difficult to read. This is due to the Canon's poor vertical resolution and its method of color mixing (for some colors, it prints a pattern of two colors to produce a shade rather than a uniform mixture). Also keep your documents short. I've had trouble with multiple-page documents getting garbled. It's probably advisable to save each page as a separate file. Also remember that an 8x14 inch page only prints 8x7 inches.

There are other color inkjet printers that share the same mechanics as the Canon (Tandy, IBM, and Quadjet), however, their internal software is not the same. As such, the *PageStream*/Canon driver will not work with these printers.

Not Professional but Impressive. I am VERY pleased with the quality of the output. I've seen hi-rez dot-matrix printouts of other programs that were more coarse than my *PageStream*/inkjet combo and they were in black only. It's not professional output, but it is impressive and a lot of fun to boot. Printing with a 64k buffer was by no means slow; quite a bit faster than printing in *DEGAS*. I am looking forward to a final version of the printer driver that handles the aspect ratio and import limitations. But until it comes, I expect to have a lot of fun with the beta version.

[PageStream, $149.95, Soft-Logic Publishing Corporation, 11131 South Towne Sq., Suite F, St. Louis, MO 63125; Tele: 314-894-8608.]

ALL ABOARD!

The Synchro Express, Track 85

Reviewed by Sam Van Wyck

They say it's the world's most powerful disk copier but then, all manufacturers and publishers of duplicating utilities say that. But the others always say something in addition. Ever notice how they tell you their program/gadget will copy "virtually" all disks or "almost" every program? Always they leave a way out. You know there will always be some protection scheme that can't be broken. Not, at least, until a new patch or gimmick is devised.

Synchro Express (SEx) is different. Read their ad! It says "BACKUP ANY DISK IN UNDER 50 SECONDS!!). ANY disk? That's what it promises: 100% success. The surprise comes when you find they are right.

I must confess that when I first saw the garish full-color ad in START Magazine I wasn't very impressed. Partly, it was the price that scared me. Seventy bucks for a 100% effective duplicator? Had to be a catch there, somewhere. Anything that good, they'd want at least $170!

SEx at the Atari Meeting

At the last meeting of M.A.S.T., one of the members asked me if I would care to try SEx with my computer and, always game for something new, I was happy to give it a try. To sum everything up in two words: it works. It works quickly, cleanly and as advertised. Every disk in my somewhat limited collection, protected or no, was successfully cloned. From what I can gather from others, with a single exception, it copied all their disks as well. That exception was *Gunship* and since only one disk of that title was available, it may not have been the fault of SEx.

Digital Image Copying

Much of the following information comes to me from experts in computer science who do not always speak clearly or in terms understandable by human being-type persons, but I shall attempt to translate. Apparently, most copy utilities operate by attempting to read and understand the data on the source disk. This information is stored in memory and later dumped to the destination disk. Depending upon the duplicating system, this might be done simply with software or might involve hardware changes or additions as well.

SEx works, to quote the ad, at the MFM/TTL level. This is the method used by commercial duplicators to create disks for sale. A master disk is read and simultaneously a mirror image is created on as many blank disks as they have machines. No interpretation or understanding is required. Note that the copy is created in synchronization with the reading of the master. (Thus the name SYNCHRO Express?) My computer uses two GTS-100 drives which have a track readout on the front panel. Both numbers march along together as the duplicate is made.

Plug It in & SEx Goes Right to Work

SEx consists of a small hardware plug and cable plus a disk with the operating menu. The unit plugs into your parallel (printer) port and a DIN plug on a pigtail goes to your disk drive socket. Your second drive (two are required) plugs into a socket mounted on the rear of the SEx assembly. Booting with the program disk in drive A, brings up a very simple menu. You select the number of tracks to copy, up to 85. Click on the AUTO button, then the COPY button and that's all there is. No parameters, no decisions, no need to think. Just push the button. The program will determine if the source disk is single or doublesided and proceed to duplication. If desired, specify a single- or double-sided copy by clicking on either of these choices instead of AUTO.

Faster Than The Average Bear!

A while back, a friend at Avalon Hill showed me their duplicating machine. The thing automatically loaded and unloaded a disk about once a minute. I'm sure they must have been using the same method of duplication as SEx. The ad states that a full duplication will be completed in under 50 seconds and again, that is correct. Watching the numbers change on my two drives was like watching the progress of an express elevator in a high rise -- a new floor about every half second. Used to be you could go make coffee and enjoy a cup or two while some of those duplicators were laboring through a copy. With SEx it's "Don't go away. I'll only be a minute." Frankly, this looks as if it might be one of the best straight disk duplicator systems going. At less than one minute per disk, it could save an incredible amount of time for our overworked disk librarians.

The Dark Side

Well sure, there will be some who will regard this utility as a license to steal. No question about that. As a matter of fact, I considered not writing this review as it might lead some of the less scrupulous among us into error. Then I realized that full page, full color ads in national magazines will attract a

lot more attention than anything I might write. But I'll say it anyway: please don't use this tool in such a manner as to hurt another being. End of message.

The greatest drawback to SEx is that it is awkward to use. It's not one of those accessories that can be left connected or switched in or out. To use it, it is necessary to disconnect your printer, attach the duplicator's 25-pin plug to the printer port, remove your disk drive connector from the back of the computer and replace it with the pigtail plug from the SEx accessory. Your second drive plugs into the back of the SEx board and that's it. You are ready to begin duplicating.

When you are done, the whole thing must be removed. Even if you do not require the use of your printer port, the circuitry will not allow you the use of your second drive except in duplicator mode. In order to restore your system to normal operation, you have to remove the entire assembly and reconnect in normal configuration.

Maybe that's not so bad but if you don't have a computer with an internal drive, it gets even more awkward. With drive A connected to the computer disk port, plug SEx into the printer port and somehow manage to make the short (6") cable stretch to the second socket on the back of drive A. This causes drive A to wind up balanced on the top cover of the computer with drive B, trailing an excess of cable, off in the boondocks next to the monitor. Not an impossible situation, perhaps, but you wouldn't really want one of your IBM-using friends to drop over and see this monstrous kluge. They keep all their messes hidden inside the cabinet.

Two programs are included with the SEx package. One is a formatting utility using skew for faster loading. It will format as many as eleven sectors and up to 86 tracks. The other is the duplication program itself.

The bottom line: I ordered one yesterday.

[SYNCHRO EXPRESS - $69.99. Coast to Coast Technologies, 931 State Road 434 Suite 225, Altamont Springs FL 32714. Tel: (407) 869-7477;(800) 962-0494 (Orders)]

Speed Ball

A Quality Game with a Breakneck Pace

Review by George Hulseman

A Futuristic Sports Game. Ever notice how many of today's sports are regulated by overly stringent rules that do nothing but slow down game play and prevent the players from doing what they really want to do. I'm talking about real sports. Take, for instance, the balk rule in major league baseball. If a pitcher fails to follow through with the motion of a pitch, the ump routinely advances all baserunners and gives first base to the batter. In football, if the defensive player so much as touches the quarterback the refs call "in the grasp."

I say let's do away with all these restrictions. Let John McEnroe use obscenities on the tennis court. Allow Dexter Manley of the Washington Redskins to spit on his opponents. And for crying out loud get rid of that "in the grasp" rule. It's for sissies.

More up my alley is the futuristic action game of *Speedball*, a fictionary sports simulation similar to soccer and ice hockey except without the ice or the sticks. It is a game not for wimps, but for homicidal and suicidal maniacs who do not wish to be bothered with silly rules and regulations. This outstanding release from Cinemaware is an intense sports action game with an intriguing style of gameplay that defies existing sports protocol or logic. For one thing, there are no penalties, rules, or regulations. This is a no-holds barred, all out free-for-all with fantastic graphics and gameplay that will make this one a classic with sports gamers of all types.

Speedball was created in England by the Bitmapp Brothers, authors of such mind-bogglingly addictive games as *Xenon* and *Blood Money*. The attention to detail is quite apparent here.

The arena in *Speedball* is a steel-walled, steel-floored enclosed area 160 feet long by 90 feet wide with a warp tunnel on the sides. The point of view is an aerial one which allows you to see about half the playing area at any given time. The screen scrolls vertically in the direction of the ball and the computer automatically chooses the player closest to the ball as the one you control.

Tackling is Tough. The game begins or is resumed when a mechanical ball launcher rises from beneath the center of the arena and fires the ball in a random direction. There are six players on each team including the goalie who stays in the net. The players attempt to take possession of the ball and can either pass it to a teammate or throw it towards the net in an effort to score a goal. The only way to steal the ball from your opponent is to tackle him, an action which requires careful timing and a lot of practice.

Speedball can be played against the computer or against a human opponent. There are two basic modes of play – knockout or league. Knockout consists of 10 rounds and can only be played against the computer. Each round is based on the best of three matches with opposing computer teams, becoming more difficult as the rounds progress. With practice I have found that the first five or six rounds can be won fairly easily, but wins are more difficult to come by in the later rounds.

A Best Feature – The Blood Bowl. League play is one of the best features of *Speedball*. Whether you're playing against human or computer opponents, you can set the duration of the season from 10 to 100 weeks (one game per week). Following each game, your standings within the league are analyzed and displayed. Then you have the option of saving your league position, resuming play, or using power tokens you have accumulated to build up your team's attributes--or lessen your opponents.

At the end of the season the top two teams play in the semi-final and the top six teams play in the quarter-finals. The winners of the semi-final go to a conference final and finally to the "Blood Bowl."

Opponents in league play are randomly selected by the computer and can range from being very easy to darned near impossible to beat. Each game lasts only a matter of a few minutes, therefore giving the player the option of playing for short periods of time or for several hours at one sitting. By saving your position to disk between games you get an opportunity to replay a potentially season-ending game by simply restoring your position. Sure this is cheating, but remember, this is not a game for wimps.

To throw the ball you aim the joystick and push the button. The longer you hold the button down, the higher the ball is tossed. It's possible to throw the ball nearly from one end of the arena to the other by holding the button down after the ball is launched. When this happens, you can see the ball as it rises and becomes larger in size. You can even see it spin--the graphics are that good.

It's very gratifying to score a goal in *Speedball*, especially against the really tough teams. A simple pass to a teammate by throwing the ball over the head of your opponent or ricocheting it off the wall is a challenging feat in itself.

Power Tokens – The Key to Winning. One of the more interesting aspects of *Speedball* is the ability to collect power tokens and use them for such devious means as increasing your stamina and strength or reducing your opponents' stamina or strength. You can even bribe officials for an extra minute of playing time or a one goal advantage for the next game. The tokens appear randomly during gameplay and can be picked up simply by touching them with one of your players. The tokens are the key to winning against some of the more difficult teams and add a whole new dimension to the game.

Power tiles are rotating squares that also appear at various locations during gameplay and can affect your opponent in a number of different ways. These tiles, which are activated when your player passes over them, can do everything from temporarily decreasing your opponent's stamina to freezing the entire team (except the goalie). The tiles go into effect immediately, lasting for only a brief few seconds. But you can accomplish a lot in a few seconds, especially if you happen to be in possession of the ball and you are within scoring range.

Speedball is a dynamic game with lasting appeal and extraordinary graphics. Best of all, there are no sissy rules to bog down game play. If you want a quality game with a breakneck pace and quality throughout, buy it.

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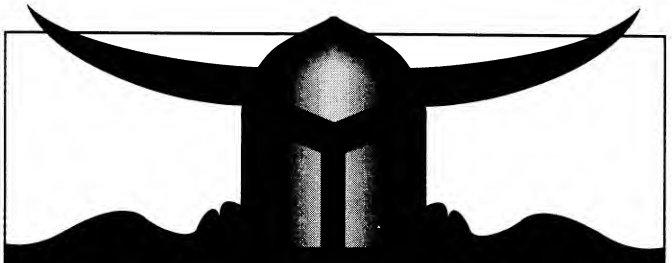

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TWO TIMES TWO

How to Double Your Disk Space

by David M. Dalton

A Late Comer. In May of 1986, after what seemed like years of waiting, I finally purchased my first computer. My selection of an Atari 520 ST should come as no surprise; why else would this article be appearing in an Atari exclusive publication. I was not, however, entirely new to computers. While employed as a Federal Investigator, I had taken a computer security course at the Department of Defense Computer Institute in 1980. This was augmented by computer courses designed specifically for investigators on how to ferret out waste, fraud and abuse in the Federal sector. In 1984 I moved into a management position and Uncle gave me a Wang Classic PC complete with 10 meg hard drive and 512k RAM to help me keep track of the activities of the 34 investigators I supervised.

When I left Federal Service to start my own business in 1986 and needed my own computer, I knew one thing for sure. It *had* to have two disk drives!! Therefore, I opted to purchase the 520 ST with a second SF 354 (single-sided) drive instead of the 1040 ST or a SF 314 (double-sided) drive. Besides, Atari was running a special at the time. You could purchase the second SF 354 for only $70, a deal I couldn't pass up.

While I never regretted this decision, I looked longingly at the double-sided drives with their increased storage capacity. For some time I followed with great interest the discussion on GENIE about do-it-yourself upgrading of single-sided drives to double-sided configuration. While it had been done at a reasonable price ($100-$120), it didn't seem to be a project for those not well versed in the technical aspects of computers (I mean, really, a pull down resistor???) and the instructions seemed to vary depending on the type of drive mechanism used.

Enter Advanced Technology Networks, Inc. (ATN). ATN had been advertising a 3.5" double-sided drive mechanism to upgrade the SF 354 drives at a price of $99.95. I had known Sing Yee, owner of ATN for several years, having met him when he worked at the computer store where I purchased my ST. Yee informed me that ATN had ordered the drive mechanisms from the manufacturer pre-set to ST specifications, making the conversion a simple matter of unplugging the old and plugging in the new. Sounded like a deal to me so I bought two of the units!!

The process of making the conversion is as follows:

1) Unplug the SF 354 from its power supply and from the computer.
2) Remove the four outermost screws located on the bottom of the case & open the case of the drive.
3) Unplug the 34 pin & the four pin connectors from the drive.
4) Remove the other four screws from the bottom of the case, which hold the drive to the case.
5) Remove the SF 354 drive mechanism.
6) Plug the connectors into the double-sided drive mechanism.
7) Modify the drive housing, if necessary, for the eject button on the new drive mechanism.
8) Reassemble, try it out to make sure it works and YOU'RE DONE!!!

Testing. If the drive continues to spin when you turn it on, simply reverse the 34 pin connector and it should work properly.

If when you try to read a disk, no files are displayed, you will have to switch the clip on the drive select switch which selects the drive number. Yee will point this out to you when you purchase the unit.

There is one other possible snag. Atari used several sources of supply for their drives. Some of them didn't use the standard 34 pin connector but rather a 14 flat blade connector. If you have one of these units it will be necessary to cut it off and install the 34 pin connector in its place. Yee has procured a supply of special 34 pin connectors that make this job much easier and will install one for a nominal fee ($5.00 when I did mine two years ago). I first tried it on my own with a Radio Shack connector with little success. Since it involves using a connector made for ribbon wire with stranded wire it's a bit of a pain. Like they say back home, "Ya gotta hold your mouth j-u-s-t right." Know what I mean, Vern?? I suggest you give Yee a fin and let him do it.

Conclusion. I have been using the converted drives for about two years now and I am extremely pleased with them. Using the CSS Format program, available on Genie, I am formatting my disks to 82 tracks at 10 sectors giving 820K+ per disk. These units are high quality direct drive mechanisms and I have found mine to be much quieter in operation than the Atari units I had been using. A nice extra is the door featured on these units to keep dust out.

The economics of the conversion are usually a concern for most people. It isn't often that you can buy the economy version and later upgrade at the same or lower price than the higher priced unit would have cost if you bought it in the beginning. That is exactly what happened to me in this case. When I purchased my

520 ST it would have cost me $100 to upgrade the SF 354 that came with the ST and $159 to upgrade the second drive ($229 – $70 special price) – a total of $259 more if I had opted for two SF 314 drives at the time of purchase. The conversion cost $99.95 per drive plus $5 for the connector on the one drive – a total of $205 and a savings of $54.

Another economic consideration is disk storage space. Somehow I seemed to have accumulated 140 3.5" disks not counting the original disks for commercial software I have purchased. By formatting these disks as double–sided I gained the equivalent storage space of 140 single–sided disks. At an average cost of $15 for a box of 10 disks that equates to a gain of $210, which covers the price of the conversion.

If this conversion interests you, give Yee a call at Advanced Technology Networks (301)948–0257. Better yet, stop by the shop at 16220 Frederick Road, Gaithersburg, Md. 20877. Tell him I sent you.

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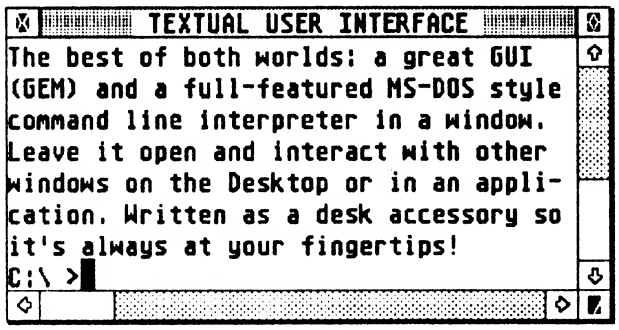

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MANHUNTER IN SAN FRANCISCO

A New Level of Mystery and Gore

Reviewed by Don Elmore

Superb Sci-Fi Sequel

Sierra On-Line, Inc. has done it again. They have released a sci-fi sequel to their "Manhunter: New York," by moving their Orbs three thousand miles westward and calling the new adventure, "Manhunter 2" (San Francisco). Although "Manhunter 2" takes up where "Manhunter: New York" left off, you need not have played the former to thoroughly enjoy the latter.

If you have played the original game and thought you managed to kill good old Phil...you didn't. The sequel starts out with Phil heading West in one of the Orb's space ships, and you following in another. While chasing him through the downtown area of San Francisco, you accidently glance off of one of the skyscrapers and crash. Right on top of a San Francisco Manhunter! While not exactly making his day...the crash landing does provide you with a Manhunter Assignment Device (MAD) and a Manhunter's credentials. Remember the MAD? The Orb equivalent of a laptop that monitors earthlings' whereabouts and also stores information in a database?

A Hoard of Uglies

But, what are the nasty Orbs up to in San Francisco? Why do mutant animals skulk about...rat-like humanoids, wolf-faced creatures? Ninjas? All of these...and more! The actual play of the game is, in my opinion, even better than the original game. One of the main reasons for that is that the arcade sequences can be played at varying degrees of difficulty, from easy to quite challenging. Yes, this computer adventure game is, indeed, configured for virtually any level game player. As in the first adventure, there is a healthy mix of both arcade action and thought provoking puzzles. The standard advice for adventure games applies here...look at everything and remember it all! The well written manual urges you to visit all locations regardless of whether you gain entry or not. The program keeps track of where you go, and if you try and end Day 1 without having visited everywhere...you will be informed that it is too early to sleep.

The propaganda on the box claims over 250 scenes with on-screen maps of San Francisco. As you roam the city...so do some pretty violent genetic experiments, and ninjas. It is up to you to learn why the Orbs are experimenting, and to stop them. This is a game with a hefty body count. And we are not talking just plain dead bodies. There is gore, galore! For example, in order to complete a sequence half way through the game, you had better have pocketed the fang imbedded in one cadaver's throat. Arms, legs and hands are left lying around, and they are all useful at some point in the game. This is not a game for the squeamish, or younger children.

Eaten but Still Alive

As in "Manhunter: New York," you usually don't permanently die. When something eats you, or a robot zaps you...the game goes on temporary hold while colleagues take you back to the screen just before the one where you foolishly entered that cave or pipe or whatever, and you have a second (and third, forth, etc.) chance to re-group and try again.

The Big Hint

BUT, there is one place where you had better be sure that you have saved your game! I apologize to the purists for giving away one of the hints, but this hint will save all a lot of frustration. Near the end of the game, you have to give the necrophilic shop owner the rat paw (hand) that you found (at least I hope you found it!) in order to be able to play his version of Three Card Monte. However, I strongly recommend that you save the game just before entering the shop, because a sign behind the shop owner says that players can steadily increase their winnings, but if they lose once, they lose it all. That is true if you haven't saved the game as you approach the shop door. Make a mistake guessing the Ace, and you cannot play again unless you have saved the game where you have the rat's paw in your possession.

The actual mechanics of play are impressive. Other than typing in names of personalities that you discover during the game...and the names under which you save different portions of the game, there is no text typing associated with the game. You can use the mouse, joy-stick or keyboard; all work equally well.

In addition to the usual first person viewpoint, this version adds a "third person perspective," allowing you to watch yourself walk around in various scenarios. I found that particular perspective interesting when I was cut in half by a ninja and I watched myself walk over to my lower half (on my hands) and sort of hop back on my legs! I also saw myself chewed up and spit out of a drainage pipe...bones and all! About the only part that was not fully depicted was the many times I fell into

boiling acid while trying to get across a narrow bridge. Oh, and I guess when the dog ate my face.

Oh, another place that you will definitely want to save your game is about half-way through, when you visit Ghirardelli Square. If you try climbing around the roofs, and break your flask of urine, you're going to be in trouble later on. However, if you have saved your game just prior to that spot, and you do break the flask, it is but a "re-boot" away. As in the previous game, the last major challenge is a maze, and this time, instead of flying a space ship through tunnel/mazes, you must navigate around lava flows.

Graphics Grotesque Par Excellence

As with virtually all of Sierra On-Line games, the graphics are stunning. And these are grotesquely stunning! You do manage to save humanity (again) and as before, you come mighty close to catching up with Phil. "Manhunter: San Francisco" retails for $49.95 and comes on three double-sided disks. For more information (or ordering) contact Sierra On-Line, Inc., PO Box 485, Coarsegold, CA 93616, telephone (209) 683-4468.

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Why Five Ataris?

Atari 800 XLs Fill Many Computing Needs

by Ben Poehland

People gawk at me, shake their heads in disbelief, when I tell them I own five computer systems. "What on Earth do you do with five computers?" they invariably ask. Like it is somehow unnatural, perverted even. Then they grin and say, "Aw-w-w, you're pulling my leg, right?"

Wrong. I really do own five computers. All 800XL's with REV C circuit boards. And they all get used on a more-or-less regular basis. Each one is a complete system, with its own monitor, drives, peripherals and software (the peripherals and software tend to migrate from system to sytem). And for me, nothing could be more natural. Except that I'm a hardboiled 8-bit devotee, which in this day and age brings glances askance from the ST people. They ask me stuff like, "Why did you waste so much money on a sackfull of crummy 8-bits when you could have bought a nice 1040 ST for the same amount?" It always amazes me that whomever I tell about my computers always assumes I went out and and bought them all on the same day.

No. 1: For Writing

It wasn't like that at all. I bought my first 800XL in early 1984, when 8-bit fever was running high. It wasn't my first computer. After many years of disdaining the high cost and primitive capabilities of home computers that populated the market of the 70's and early 80's, in 1982 I purchased a diminutive thing for $79: the Sinclair Z-80. It couldn't do much, but it was cheap, and it intrigued me. I had taken FORTRAN in college and later picked up the rudiments of BASIC on my own, on a giant mainframe IBM 360/370 timeshared system. I never did anything useful with the Sinclair, but watching that tiny box on my kitchen table run BASIC routines just like the monster IBM fascinated me no end. The Sinclair was a toy, but it whetted my appetite. Around Christmas of 1983 it met an untimely end when the RETURN key on that dreadful membrane keyboard became permanently stuck. Mortified, I once again dismissed all computers as worthless junk.

It was an attitude I was soon to lose. Late in 1983 I had submitted a short manuscript to an audio electronics magazine. I did it in my usual style, banging it out on a Korean War vintage L.C. Smith manual typewriter to the accompaniment of primal screams and heaps of balled-up paper. A few days after the Sinclair died, I received a note from the publisher congratulating me on acceptance of my article and begging for more manuscripts. The note was accompanied by a CHECK. My ecstacy cooled when I considered the prospect of cranking out long manuscripts on the old Smith; just getting the thing out of the closet was an invitation to a hernia. There had to be a better way.

I asked one of the secretaries at work about her typewriter. She was indignant: "This isn't a typewriter, it's a word processor." Say, what? A computer with a typewriter in it. You could buy it at the department store. I knew I was onto something. The Great Hunt began.

Atari 400. Membrane keyboard, forget that! TI-99, hmmmm. Whoops, all gone, TI quit the business. Commodore 64. Worth serious consideration. Four times the memory capacity of the Atari 400 and TI-99. Ugly color, though--barf brown. But the printer? Print quality was paramount, since my printouts were going to publishers and such, and I'm fussy about the appearance of things. Dot matrix, I hated it. You had to buy an incompatible brand of printer and hook it up to the Commodore through a thing called an "interface" (which you also had to buy), and for all that, you got dots. Fooey.

Atari 800XL. Handsome-looking thing. Nice keyboard. 64K RAM, like the Commodore. Best Buy rating in *Consumer Reports*. A highly-praised word processor program for it, something called *AtariWriter*. Then I saw the printout of an attached 1027; it was better than my old Smith! But wait, there's more! It doesn't need an interface! And that's not all! It comes with BASIC! BASIC, like the Sinclair? Yeah, only better! It was too good to be true. I dragged the thing home, threw it together, and took to word processing like a bear to honey. I can't say those first few months were exactly smooth sailing, but I never looked back. By the end of 1984, I was pounding the keys regularly.

No. 2: For Video Testing

In 1985 a friend who knew I was an electronics hobbyist gave me a nice old 18 inch Philco color TV that was close to death. Being mainly an audio freak I

didn't have any video test equipment on my bench. Rather than buy an expensive NTSC color video test pattern generator, I purchased my second Atari 800XL, stuffed video test software in it, and have used it ever since as a piece of test bench equipment. With the Atari and just a few dollars' worth of parts, I completely restored the old Philco. I'm still using that TV today, and guests remark what a nice picture it gets. I enjoy the expressions of astonishment when I tell them the set was made in 1972.

No. 3: For the Office

Early in 1986 I inherited responsibility for producing a major scientific manuscript at work. The task was overwhelming: I had to boil down a foot-high stack of scientific data (the stack weighed 17 pounds) into an 8-page journal article. My company's VAX system offered MASS-11 word processing which is about as easy to learn as bionuclear engineering, and I'm such a low-life in the company they wouldn't give me my own terminal anyway. So with my own money I bought my third 800XL system and installed it on my desk at work. I successfully completed the journal article (if you're interested, check out "In Vitro Antiviral Activity of Dammar Resin Triterpenoids" in the Journal of Natural Products, Vol. 50, No. 4, Jul-Aug 1987, pp. 706-713). I took a nice tax deduction for that system and still use it every day.

No. 4: For Testing Upgrades

I bought my fourth 800XL shortly after the third one. With three systems up and running, I was becoming ever more dependent upon these machines and felt the need for a backup in the event of a major failure. I had already weathered several close calls and minor technical difficulties and knew I had entered a "window of vulnerability." The price of XL machines by this time had fallen to levels below what I paid for the Sinclair; real estate developers were even giving them away as premiums. In practice, this fourth machine became a test bed for checking out various upgrades before making the same upgrades in my on-line systems. It is really the pits to perform electronic surgery on a computer that you are dependent upon for the conduct of your personal business. It is much less stressful to perform the surgery on a spare machine, check it out on the bench, then just swap machines. In this way, I painlessly performed an AtariBASIC RevC chip swap, RAMBO, and homebrew video upgrades for all my machines, with zero down-time. Without the pressure of having to get the computer back into service as quickly as possible, I could take all the time I needed to perform my modifications with great care. With the exception of one RAMBO upgrade that suffered a catastrophic RAM chip failure during bench trials, none of my systems has suffered downtime due to failure of an installed mod. In addition to its function as emergency backup and test bed, the fourth machine also serves to entertain guests. Pole Position is a perennial favorite.

No. 5: For Mom

I got my fifth XL for free in 1989, but this machine has a tragic history. Around 1987 a friend of mine, a fellow XL enthusiast, gave his sister an XL system as a present. Some time later his sister's house burned completely down, and she gave the salvaged remnants of her computer back to him as a source of spare parts for his machine. He had a 1027 that was giving him trouble, so he gave me the burnt 800XL in payment for my repairing his 1027. Fortunately, the computer was not melted, but the entire machine inside and out was coated with tarry black smoke condensate. The power supply for this unit was dead and was the unrepairable Type II. How I restored this machine to perfect condition is another whole story, but I did it. It is now on loan to my Mom out in Arizona. After you have provided long-distance hardware support and have taught a novice the rudiments of DOS and word processing over the phone, you develop a deep sympathy for those guys who man customer support lines at hardware and software companies.

These machines are such an integral part of my everyday existence, I don't see how I got along without

So here it is, 1990, and I'm banging out this article on a RAMBO'ed XL attached to an XEP-80, using *AtariWriter-80*. In 1980, if someone had told me that ten years from now I would own five computer systems, I could not have conceived it. But today these machines are such an integral part of my everyday existence I don't see how I got along without them. Sure, the ST's and MacIntoshes and PC's are more powerful and more socially acceptable. And if I only had one 8-bit system, I might be tempted to put it aside for a 16-bitter. But, upgrading five systems is beyond my budget. Besides, all my computing needs are still being met by the 8-bits, and the 8-bit products I've purchased in the past year all exhibit a degree of sophistication I could not imagine two years ago. Even the madness of today's marketplace cannot deter me from my conviction that an 8-bit XL/XE/XEGS product still represents the best value I can obtain for my computer dollar. This trend appears to be continuing into the 1990's, and I, for one, am looking forward to it.

by Frank E. Kweder

(For the Atari XL/XE Computer)

Hilbert

This one is derived from an Apple program in BYTE 6/86. I added GTIA and a few other options to add variety. An example of recursion which "experts" always say is impossible in Basic. I refer you to Dave Small for his definition of an "expert."

```
5 REM ADAPTED FROM APPLESOFT PROGRAM OF HILBERT CURVE -- BYTE 6/86
10 GOTO 1000
100 ORDER=ORDER-1
110 KL=KL+PLUS:IF KL>NKL THEN KL=1
120 COLOR KL:GOSUB 300:GOSUB 300:GOSUB 400
160 X=X+DX:Y=Y+DY:DRAWTO (X/S)+Z,Y+W
170 GOSUB 400
180 ORDER=ORDER+1
190 SOUND 0,PEEK(85),KL,4
200 RETURN
300 TURN=-TURN
310 TEMP=DY:DY=-TURN*DX:DX=TURN*TEMP
320 IF ORDER>0 THEN GOSUB 100
330 X=X+DX:Y=Y+DY:DRAWTO (X/S)+Z,Y+W
340 RETURN
400 IF ORDER>0 THEN GOSUB 100
410 TEMP=DY:DY=-TURN*DX:DX=TURN*TEMP
420 TURN=-TURN:RETURN
1000 W=2:GRAPHICS 0:SETCOLOR 2,0,0:SETCOLOR 4,9,2
1005 ? :? :? " AFTER PICTURE IS DRAWN, PRESS START TO TRY ANOTHER":? :?
1006 ? " GRAPHICS MODE (9-11) ";:INPUT GM
1007 IF GM<9 OR GM>11 THEN ? "}":GOTO 1006
1008 IF GM=9 OR GM=11 THEN NKL=15
1009 IF GM=10 THEN NKL=8
1010 ? :? :? " WHICH ORDER # (1-5) ";:INPUT ORDER:Z=7-ORDER
1012 ? :? " SPEED OF COLOR CHANGE ";:INPUT PLUS:PLUS=PLUS/10
1013 ? :? " STARTING COLOR (1-";NKL;") ";:INPUT KL:KL=KL-1
1014 GRAPHICS GM:IF GM=10 THEN GOSUB 2000
1015 COLOR KL:POKE 752,1
1020 DY=192/2^ORDER:S=2.45
1030 TURN=-1:DX=0:X=0:Y=0
1040 PLOT X/2+Z,Y+W
1050 GOSUB 100:SOUND 0,0,0,0
1060 IF PEEK(53279)<>6 THEN 1060
1070 POKE 764,255:GOTO 1000
2000 RESTORE :FOR CREG=704 TO 712:READ A:POKE CREG,A:NEXT CREG:RETURN
2010 DATA 6,66,56,26,194,0,150,98,84
```

SineGr7

Another Apple algorithm. Just a single hi-res undulating line turned into a real Atari eyeball twister. I just added the sound for this occasion. It dawned on me that using Peek 84 and 85 would work pretty well to synchronize the sound with the graphics.

```
5 GRAPHICS 0:GRM=40:WD=136:GOSUB 300
20 FOR I=-10 TO 10 STEP 0.1:SOUND 0,I*I+20,10,4
21 POSITION 34,0:? I;" ";
30 Y(100+(I*10))=20*SIN(I):NEXT I
32 POSITION 20,0:? " PRESS START TO END";:POKE 87,K
36 Q=5:T=1
37 FOR I=T+5 TO WD STEP INT(RND(0)*4)+3
38 IF I>70 THEN SETCOLOR 1,I,6
39 IF I<=70 THEN SETCOLOR 2,I+6,10
40 SETCOLOR 0,I+3,I/9
46 COLOR 1:PLOT I-1,Y(I-1)+GRM:COLOR 2:DRAWTO I+19,Y(I-1)+GRM
47 COLOR INT(I/68):PLOT I+10,Y(I-1)+GRM
48 COLOR 3:PLOT I,Y(I)+GRM:DRAWTO I+21,Y(I)+GRM
49 SOUND 0,PEEK(84)*2+PEEK(85)/2,10,6
50 NEXT I
60 Q=Q+1:IF Q=10 THEN Q=5
65 T=T+1:IF T=6 THEN T=1
68 IF PEEK(53279)=6 THEN GRAPHICS 0:END
70 GOTO 37
300 GRAPHICS 7+16:POKE 712,0:POKE 710,22:POKE 708,152:POKE 711,86:DIM Y(200)
310 DL=PEEK(560)+256*PEEK(561):POKE DL+3,71:POKE DL+6,6:K=PEEK(87):POKE 87,0:POSITION 3,0
320 ? " sinewave filling array";:RETURN
```

Short

I wrote this after the ANALOG "Paperweight" April Fool turmoil. It's written to be as obscure as possible.

```
5 REM SHORT CIRCUIT BY FRANK KWEDER
10 GOSUB 200:GRAPHICS 2:POSITION 4,3:? #6;A$(6,10),,"short circuit":POKE 764,255:POKE 752,1
20 ? :? " Press any KEY to Destroy your":? " Screen Editor! Happy Hari-kiri!"
22 ON PEEK(764)=255 GOTO 22
24 GRAPHICS 50:POKE 708,5
```

```
25 Z=INT(RND(0)*14):W=INT(RND(0)*11):FL=0:FOR D=1
TO 50:NEXT D
26 EMF=ABS(1-EMF)
28 POKE 755,EMF*2+2*(FL=0)
30 POSITION Z,W:? #6;" ";A$(1,1):GOSUB 60
31 POSITION Z,W:? #6;" ";A$(1,2):GOSUB 60
32 POSITION Z,W:? #6;" ";A$(1,3):GOSUB 60
33 POSITION Z,W:? #6;" A";A$(2,4):GOSUB 60
34 POSITION Z,W:? #6;" AT";A$(3,5):GOSUB 60:POKE
756,224+RND(NOISE)*2+1
35 POSITION Z,W:? #6;" ATA";A$(4,4);A$(10);"
":GOSUB 60
36 POSITION Z,W:? #6;" ATAR";A$(10);" ":GOSUB
60:POSITION Z,W:? #6;" ATARI ":GOSUB 60
40 FL=FL+1:IF FL=2 THEN GOSUB 70:GOTO 25
50 GOTO 26
60 SOUND 0,PEEK(84)/2,12,12:SOUND 0,0,12,0:RETURN
70 IF RND(INFINITY)<0.4 THEN POKE 756,195+Z:POSI-
TION Z,W:? #6;" ";A$(6);" "
80 RETURN
200 DIM A$(10)
210 FOR X=1 TO 10:READ A:A$(X)=CHR$(A):NEXT X
220 RETURN
300 DATA 193,212,193,210,201,225,244,225,242,233
```

Ripple

This is a demo for the animation used in SHORT. It is also a demo for more interesting formatting of simple programs.

```
5 REM RIPPLES BY FRANK KWEDER
10 GOSUB 200:GRAPHICS
0:DL=PEEK(560)+256*PEEK(561):POKE 752,1:POKE
DL+10,7:POKE DL+11,7
20 SETCOLOR 0,4,4:SETCOLOR 3,14,8:SETCOLOR
2,0,0:SETCOLOR 1,8,8
21 FOR X=20 TO 0 STEP -1:SOUND 0,X,10,X/2:NEXT
X:SOUND 0,0,0,0
22 TRAP 45:POKE 764,255:POSITION 10,12:? "INPUT
SPEED (1-99) ":POSITION 29,12:INPUT #16,X
23 IF X>99 THEN 21
25 POSITION 6,18:? " PRESS <SPACE> TO CHANGE
SPEED";
26 POSITION 9,20:? " PRESS <ESCAPE> TO QUIT";
27 POSITION 27,5:? "ripples"
30 POSITION 8,5:? A$(1,1);"TARI":GOSUB 50
31 POSITION 8,5:? A$(1,2);"ARI":GOSUB 50
32 POSITION 8,5:? A$(1,3);"RI":GOSUB 50
33 POSITION 8,5:? "A";A$(2,4);"I":GOSUB 50
34 POSITION 8,5:? "AT";A$(3):GOSUB 50
35 POSITION 8,5:? "ATA";A$(4):GOSUB 50
36 POSITION 8,5:? "ATAR";A$(5):GOSUB 50
37 POSITION 8,5:? "ATARI":GOSUB 50
42 IF PEEK(764)=28 THEN GRAPHICS 0:END
45 ON PEEK(764)<>33 GOTO 30:GOTO 21
50 FOR DE=1 TO X:NEXT DE:RETURN
200 DIM A$(5)
210 FOR X=1 TO 5:READ A:A$(X)=CHR$(A):NEXT X
220 RETURN
300 DATA 225,244,225,242,233
```

Mondrian

Originally a Gr.7 XIO fill demo from SOFTSIDE. I used GR.15 for more resolution on the smaller boxes. This one glitches occasionally when the fill escapes from the box. It doesn't happen too often. Press START for more.

A little research found this program to be a "K-Byter" by David Suwala of Flanders, N.J. It was called "Pictures at an XIO-bition." I still don't know which issue of SOFTSIDE it was in.

```
10 REM XIO FILL DEMO: SOFTSIDE(MODIFIED)
25 GRAPHICS 31:POKE 711,10:SOS=53279:RAND=53770
30 DL=PEEK(560)+256*PEEK(561):POKE DL+3,71:POKE
DL+6,6:K=PEEK(87):POKE 87,0
35 POSITION 6,0:?
CHR$(237);CHR$(111);CHR$(206);"D";CHR$(210);"Ia";CHR$(
238)
36 POSITION 24,0:?
CHR$(240);CHR$(242);CHR$(229);CHR$(243);CHR$(243);"
";CHR$(243);CHR$(244);CHR$(225);
37 ? CHR$(242);CHR$(244);:POKE 87,K
40 X=50:Y=65:A=1:B=1:F=1:R=0
45 LUM=INT(PEEK(RAND)/36.43)+6
50 COLOR INT(PEEK(RAND)/85)+1
60 SETCOLOR 0,INT(4*RND(0)),5:SETCOLOR
1,INT(8*RND(0)),INT(8*RND(0)+1):SETCOLOR
2,INT(13.1*RND(0)),LUM
70 R=R+1:ON R GOTO 80,90,100,110
80 X=X+A:Y=Y-B:GOTO 120
90 X=X+F:Y=Y+A:GOTO 120
100 Y=Y+F:GOTO 120
110 X=X-B
120 IF R=4 THEN R=0
125 V=0.799:W=1.6:G=15:H=5
130 PLOT X*V+9+H,Y*W+G:DRAWTO X*V+9+H,(Y-
F)*W+G:DRAWTO (X-F)*V+9+H,(Y-F)*W+G
135 POSITION (X-F)*V+9+H,Y*W+G
140 POKE SOS,0:POKE 765,INT(PEEK(RAND)/85)+1
150 XIO 18,#6,0,0,"S:"
160 A=B:B=F:F=A+B
170 ON F>=144 GOTO 180:GOTO 70
180 ON PEEK(SOS)<>6 AND STRIG(0) GOTO
180:GOTO 25
```

DOS XE

(From the Eyes of an Enhanced Density User)

Review by Ron Peters

Well, Atari has done it again ... produced another DOS that is not truly compatible with previous versions (DOS 2.0 and 2.5). You would think that Atari would have learned its lesson with the blunder of DOS 3.0 (which was also not compatible, and was received by the Atari users like a bat at the hairdressers), but apparently not.

Atari DOS 2.0 is single density (SD), and 2.5 is about 1.4 density–"enhanced density," as Atari called it (much like the difference between regular and king size in cigarettes, not much). But, finally, true double density (DD) comes along in DOS XE, so that each disk will hold twice as much data as with DOS 2.0. But, true DD comes at a high price–near incompatibility.

DOS XE is for the XL and XE computers that have the XF551 disk drive. DOS XE can be configured to work with 1050 and 810 disk drives, in single or in combination, but will only read and write DD disks on the XF551. It can also be configured to the number of file buffers you want to establish, to a 130XE RAM disk, to load an RS–232 handler, and to run a BASIC program automatically upon bootup of your computer.

While DOS XE only supports four disk drives, it will handle drives capable of 16 megabytes and file lengths of 8 megabytes.

DOS XE also has a program to convert DOS 3.0 files (as if anyone had any) to DD, and allows the use of subdirectories, much like with IBM DOS. However, instead of using the IBM backslash to separate path names, Atari chose to use the right arrow symbol. No sense making it easy for those folks who have IBM machines at work, or those who use *pc ditto* on the ST machines.

Atari also has made some provision for the thousands of programs and disks out there in DOS 2.0 or 2.5. You may "access" them by loading in "extra program code" (could that be DOS 2.5?) and then calling the D1 drive A:, the D2 drive B:, etc. Once you've accessed these files, you can copy them to a DD disk. Unfortunately, you may not reverse the process.

For those of you who are used to the simple, one–menu format of DOS 2.0 or 2.5, Atari has simplified (?) the task on XE by having a main menu with three sub–menus. The main menu offers four choices: File Access Menu, Machine Language Access Menu, System Function Menu and Exit to BASIC.

The File Access Menu allows you to list, protect, erase, rename, view, copy or append a file. You can also create subdirectories (folders on the Atari ST), set the default directory, and format a disk.

The Machine Language Access Menu offers the options to load or run a binary file, save or append memory to a binary file, display or change memory. Again, on this sub–menu you can list files or set the default directory.

Finally, the System Function Menu has provisions for running batch files, setting the current date, creating a SYS file, duplicating a disk, and my favorite option––"access" to DOS 2.0 or 2.5 files! Again, you can list files on a disk or set the default directory, as well as format a disk.

I wish Atari would standardize its naming conventions in conjunction with DOS functions. By this I mean that with earlier DOS versions it was called formatting a disk. Now with DOS XE it's called "initializing" a disk, like IBM DOS. However, instead of the IBM backslash for path names, Atari chose the right arrow symbol. But, when you "access" previous DOS files, you use the IBM convention for disk drives: A: instead of D1:. And again, with DOS XE you can create subdirectories, but on the Atari ST it's called folders.

It's almost like Atari wants to position itself from IBM, but is hedging its bets. Wouldn't it be nice if some measure of standardization existed no matter what brand of computer you chose?

What do I like about DOS XE? I like the ability to create subdirectories (or is it folders?) and date–stamp files. I also like the option of using a command line entry rather than going through the menu prompts––again like IBM DOS. And the ability to run batch files (another IBM term) is very useful.

I don't like the sub–menu approach. I like to see all my options at once, and not have to switch among various menus. Even with the additional features of DOS XE, I'm sure a one–menu approach could be designed.

But let's face it, this is all a moot point for me. With a 1050 drive, using DOS XE is like getting in the rear door of my car and then climbing in the front seat to drive. Guess I'll stick to DOS 2.5. Besides, the more you pack onto a disk, the more you lose when you spill coffee on it!

Thanks anyway, Atari.

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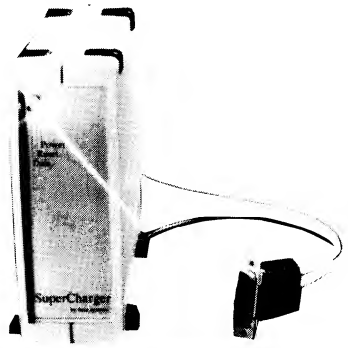

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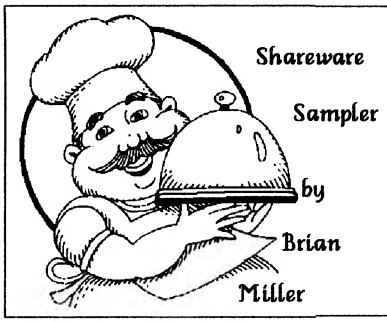

PCFILE, V5.0

A Classic Shareware Program in the MS-DOS World

A fair amount of news and publicity has been devoted recently to the growing availability of IBM emulation hardware for the Atari ST. For a long while *pc ditto* software has let many of us enjoy our favorite MS DOS programs, although slowly, on our STs. With that in mind, I trust you will indulge my devoting this month's column to a synopsis of *PCFILE* version 5.0.

This Buttonware product is one of the most recent versions of a well established database program for use with IBM compatible machines. *PCFILE* will not run on an ST without benefit of emulation software or hardware. I have been able to use the program satisfactorily with the software version of *pc ditto*. I can't offer a specific analysis of the speed with which *PCFILE* worked. Although imprecise, let me say that the program was not painfully sluggish, though noticeably slower than it ran on my AT compatible.

DB Compatibility

PCFILE is well established in the shareware market, and has undergone numerous revisions. In its "DB" flavor, *PCFILE's* file format is the same as *dBASE*. This means that database files created with *PCFILE* will work without modification using *dBASE III PLUS*, *Fox Base*, *DBXL*, and even *dBMAN* for the ST. The "DB" version of the program incorporates the use of a mouse, giving you the choice of selecting menu options with the keyboard or mouse.

PCFILE has not lost its flat file nature. You can open only one database file at any given time. This DB version does allow you to "relate" information from other database files in the output of reports. While *PCFILE* can still be found on many Bulletin Board Systems, it is now marketed as commercial software, and retails for $79.

Getting Started

PCFILE is a powerful yet fairly easy program to use. The program comes complete with an installation program which will configure the program to your hardware. The install program also "unzips" files as it copies them to your hard or floppy disk system. A 300 page manual is included on disk. It serves as a thorough reference for those unfamiliar with the program. It provides an adequate tutorial in how to set up a database, for those new to using database programs.

PCFILE is menu driven. Its menu windows are attractive and easy to follow. You are guided each step of the way with a series of easy to understand options. If you are unsure what to do, you can activate a context sensitive help feature by pressing [Alt]+h. A friendly help window pops to the screen to give you handy instructions. This system offers sound guidance and also directs you to the appropriate section of the manual for additional assistance. You can also choose to have the help system work as a tutorial. If this feature is chosen, the program will display the corresponding help window for every action you take.

When you boot *PCFILE*, you are given the chance to specify the directory where the database is located. The program displays the names of any database programs it finds, or gives you the option of creating a new database. If you choose an existing database, you are then presented with the MASTER MENU. You can opt to add or find records, search for data, print reports, or choose a number of utility functions.

Creating a Database

If you decide to create a new database, you are presented with a screen where you specify the "fields" or pieces of information that you want to collect and organize. You designate the type of information you plan to collect, and how much room to set aside for each field. For example, if you want to organize information by last name, you might specify a character field and set aside 25 spaces. If you were to create a field for price, you would make it a numeric field for which a variety of mathematical manipulations are allowed.

PCFILE lets you create not only character and numeric fields, but logical, date, and memo fields, too. Logical fields are "boolean" or true/false. For example, John Doe is either a member of the Wimps of America club, or he is not. No other choices are allowed. In contrast, a character field would let you specify any variety of responses in the field, limited by the number of spaces reserved in the field.

A Date field lets you view information and compare information by date. You can make comparisons with the date field. You can also transform the way the date is presented. Though *PCFILE* forces you to input a date as DD/MM/YY, reports give you greater flexibility in how the date is displayed to the screen or printer.

A memo field lets you write a brief message to be included with the individual record. This information can be displayed to the screen, or printed as part of a report. *PCFILE* offers an advantage over *dBASE* in that it lets you search for common information that is included within a memo field.

Inputing Data

Once you have established the field types and sizes, you are given the option to begin entering information, or you can quit and do so later. You can settle for the default screen and names of fields, or you can customize your data entry screen using a number of tools within *PCFILE*.

This process is not especially difficult, but it is somewhat tedious. You can change the physical layout of the screen. You can arrange several fields across the screen. You can also change the field name as it appears on screen. For example you could change the display from F_NAME, to First Name. The end result is that data entry is easier to figure out, and more pleasing to look at.

> ... powerful enough to get the job done, but not so powerful that it gets you into trouble.

Indexing the Database

The real strength behind any database is in how effectively it lets you organize and review the data you have taken the trouble to enter. *PCFILE* shines in this department. First, *PCFILE* indexes information. When you open a database for the first time, it will prompt you to select a field by which you want the information displayed. If you were to choose the field for last names, the data would be depicted alphabetically according to this field, in either ascending or descending order. If you chose ascending, the last name "Zigfried" would be shown at the end of a listing to the screen or printed report, even if Zigfried was the first record you actually entered. Indexing does not change the physical order of the data.

PCFILE lets you set up to 11 indexes, one of which is active at any given time. Data will be displayed by last name, until you choose another index. If you switched to age, for example, the Zigfried record would be displayed according to this variable. *PCFILE* automatically assigns the name of an index, though you can override this feature.

Moving Through the Database

PCFILE lets you find and display information in a variety of ways. You first need to select "Find a Record" from the master menu. You are then asked, "How shall we locate the record?" You can move to the beginning or end of the file. You can choose the next sequential record to look at, or you can browse forwards or backwards in the file. Choosing one of the browse options presents your database in rows or columns much like a spread sheet.

Finding Information

The real fun and power of *PCFILE* comes in choosing the Search for Data option. You can choose to conduct a simple, complex, or global search for data. Choosing the simple option presents a blank record. Type in the information you are searching for in the respective fields and *PCFILE* goes to work. The complex search is like *dBASE* in that you type in a search command using a syntax similar to *dBASE*, but several short-cuts have been incorporated to make the typing chore less difficult. For example, .and. becomes &, and .or. becomes |.

PCFILE supports two search methods which are not directly available in *dBASE*. One is the soundex search. If you are not sure of a spelling, you type what you think it is and *PCFILE* will present records which closely resemble what you have typed. *PCFILE* can also conduct a global search. It will look for the same search text in all the fields of your database. If you asked it to search for "Smith," it would look for "Smith" in every field. Once you have found the records according to the search criteria, you can modify the information of the selected record, look at the next or previous record, or browse up or down in the file.

Writing Reports

The real benefit in using a database is in the flexiblity of presenting information. *PCFILE* is adept in its report writing capability. You can choose the default row format, page format, or customize your report with either the free form or command options.

PCFILE can help you write letters and includes its own text processor for this purpose. You can also graph information from your database. You search for information in the fashion already described to print reports, letters, or graphs which meet the conditions you have designated.

Additional Goodies

PCFILE's utilities let you modify the structure of your database and copy the database, or a part of it, to another file. You can also import or export the data in a variety of formats. A major strength lies in its compatibility with *dBASE*. I was able to effectively manipulate a database I set up for use at work by toggling between the two programs. Since I was already familiar with *dBASE*, I could use its strengths to my advantage, and then switch back to *PCFILE*. I was confident my coworkers could navigate *PCFILE's* menu system, complete with help mode, quite handily. They would be spared the drudgery of having to learn to use *dBASE*.

Using *PCFILE*, I was able to quickly generate several reports which could be used at any time to extract the information we needed to make our jobs a little easier. I was able to accomplish this task easily, without having to write and debug *dBASE* programs. I was sure *PCFILE's* menus would be far superior to any effort I could manage. *PCFILE* is a capable and impressive program. As one of my bulletin board buddies quipped, "It is powerful enough to get the job done, but not so powerful that it gets you into trouble."

A Closing Story

To close on a bit of painful irony, I spent a considerable amount of time in setting up *PCFILE* for use at work. I used my bargain basement computer to write the reports and to clean up the database. I also tested *PCFILE* on my ST in IBM mode. The program worked just fine on both computers.

Eventually, I brought *PCFILE* and our database to the office. I followed the same installation instructions on our expensive name brand compatible that I had used on my mail order special, and chameleon ST. Guess what. The program bombed. Surely a glitch, so I tried again. The computer locked up and had to be restarted. I have yet to get *PCFILE* to run on our sophisticated, yet not so compatible, office computer. To salvage my effort we ended up buying an inexpensive *dBASE* clone.

Well, that's it for another month. If you know of a piece of shareware or pd software which you would like to see receive deserved recognition, please send it c/o Brian Miller, 13848 Delaney Road, Woodbridge, VA 22193. Maybe for the next work project I could use a database program written for the ST.

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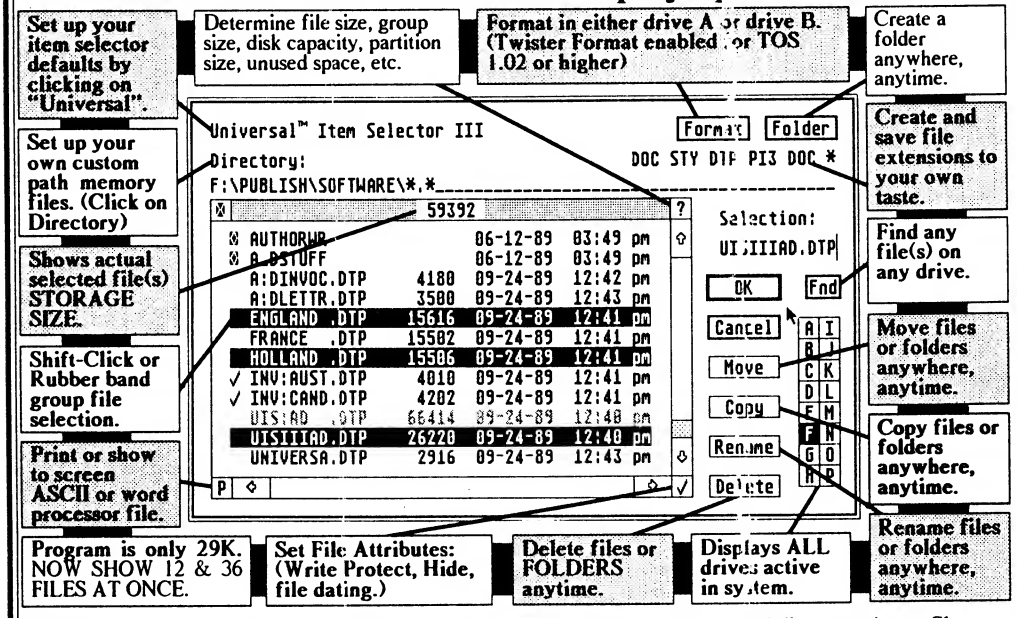

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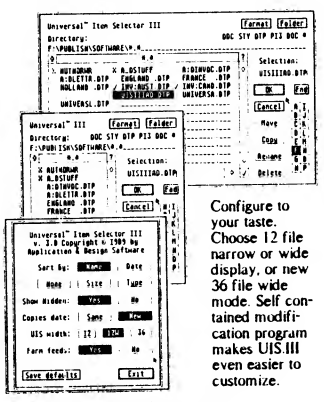

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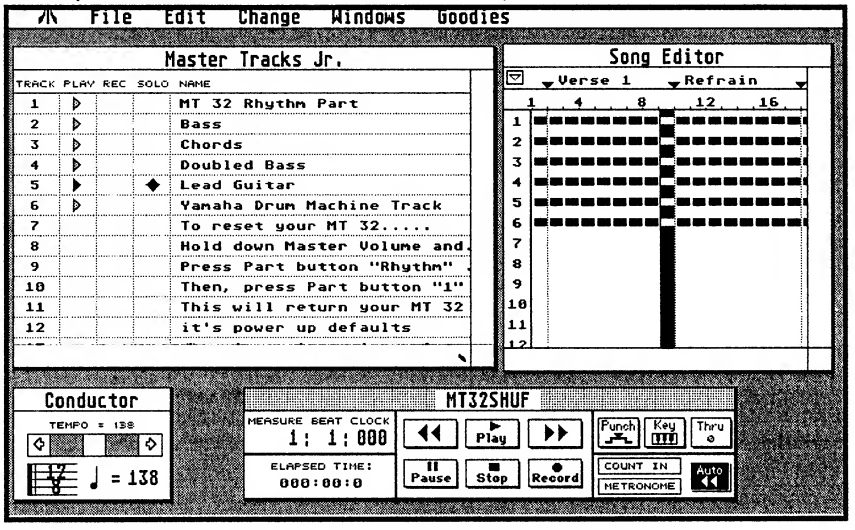
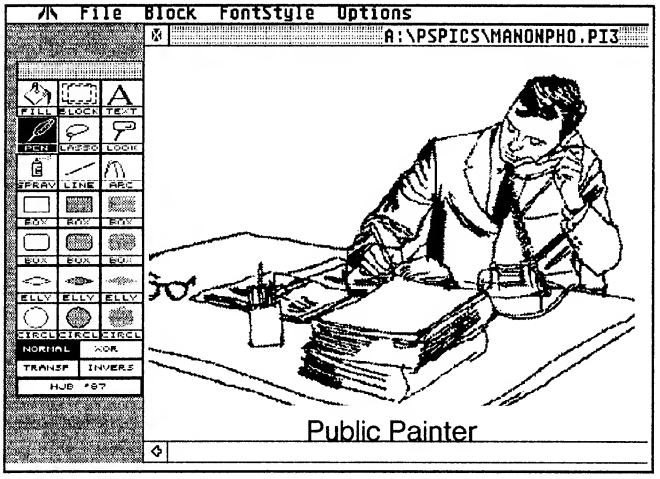


10 NEW DISKS EACH MONTH!

#451: LASERJET UTILITIES Contains various printer utilities, drivers, accessories, and even downloadable fonts for HP LaserJet printers. Disk includes ENVELOPE .ACC- envelope printing utility, FONTS- Camelot and Candy downloadable font types, HP DUMP- prints from the screen when ALT + HELP keys are pressed, LASERJET Configurer- create your own printer driver, and PRETTY PRINT- a simple utility that allows you to take a text file and print it using various soft fonts with your LaserJet printer.

#452: MONOCHROME PAINTING PACKAGE -Three (03) high resolution painting programs. Includes: ANDROMEDA- a Degas type paint program imported from the German PD scene. Andromeda will load Degas pictures, allow cutting and pasting of portions of the image, and has variable zoom modes. It only saves images in straight 32000 byte bitmap file, but there are many conversion utilities avaiable to change the .PIC to .PI3. Documentation included. PUBLIC PAINTER- another paint program from Germany that will handle .IMG, DEGAS, .NEO, it's own compressed format, and a few other filetypes. Converts color .NEO to monochrome within the program. Public Painter is a very powerful program. The docs are in German, the Menus are in English! MEGABLIT v2.8- freeware by Darek Mihocka. Megablit is a high-res paint program that works in all resolutions on all STs. It is window based, and uses the scroll bars to move around the work area, which is many times bigger than the actual screen, It also has many features not foound on ANY paint programs. Documentation and Source Code included..



#453 CLIP ART #12. Transportation Clip Art for Desktop Publishing. Includes Cars, Trucks, Planes, Boats, Helicopters, etc. scanned in at 300 dpi. Excellent Artwork! Included IMAGESHOW viewing program. (See the picture of a limousine in the PageStream sample screen!)

#454 CLIP ART #13. Transportation Clip Art #2- More Vehicles, Planes Trucks, etc. Great pictures for Business Cards, Flyers, etc. Includes IMAGESHOW viewing program.

#455 INVENTORY PRO, v3.0 Copyright 1987, 1988 by High-Tech Advisers. A simple and efficient Inventory Control System for the Atari St. Now Shareware. Full documentation included..

#456 PAGESTREAM DEMO, v1.8. This is a fully functional demo of one of the most powerful Desktop Publishing programs available for the Atari ST computer! This demo will allow you to explore all of PageStream's features, and to print out your results. Saving your documents is not possible with this demo version, and when you print a full-page layout, a diagonal "PAGESTREAM" will appear accross the length of your page. These are the only limitations of this demo version. Includes CHART.DOC and GRAPHICS.DOC. These 2 documents show PageStream's great ease-of-use, as well as some of it's more powerful features.

#457 PUBLISHER ST BORDERPACK. A disk full of ready-made "full-frame" borders in .DTP and .IMG formats. Ready to use with Timework's Desktop Publisher ST program. Includes 15 .IMG and 15 .DTP files and IMAGESHOW so that the .IMG files can be previewed.

#458 STICKER PICS. Disk crammed with additional graphic images to accompany CN Disk #295 "STICKERS", a great German disk labeling utility. ENJOY!

#459 ATARI CASH REGISTER. by The Floppy Wizard, Inc. is a complete Cash Register and Inventory Control program. It's simple to use, and is very "intelligent" in the sense that it makes assumptions automatically according to how data is entered or retrieved. This SAMPLE version is fully functional, but limited to 75 records, 10 charge accounts, 10 layaway accounts, 10 COD mail accounts, and 10 Gift Certificate accounts. Documentation included.

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New Disks for MAY

#440: Star 2000. Star Data Subset is a newly released freeware star plotter and browser based on the 2,000 brightest stars from the Yale Bright Stars Catalog. SDS is really a simplified subset of *Star Base*, a commercial program by J.Andrzej Wrotniak, which has more features and contains all 9000+ stars from the YBS. What it does:

* Plotting star maps in various projections and in different co-ordinate systems,

* Displaying a database window with the data on stars,

* Drawing the Hertzsprung-Russel diagram (color versus absolute magnitude).

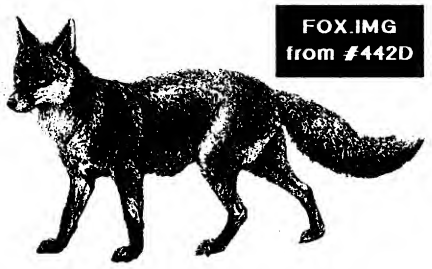
All three windows can be present on screen at the same time, which makes referring to different aspects of the database quite convenient. All operations can be performed on the entire database or on its subset filtered with respect to one or more star attributes. Any star in the map and in the H-R diagram can be identified by pointing; the program will also find and show stars selected by name or by catalog number. SDS runs in color and monochrome; it also runs (and looks most impressive) in the Moniterm display standard - real or simulated (as with the Monster emulator).

#441: TCOS V1.2. (c) Perfect Evolution 1989, By Matthew P. Aubury. TCOS is an information storage system which will run on any Atari ST in either medium or high resolution. It is designed to allow you to structure information in a logical way which allows you to access data quickly and efficiently. Data are arranged in a series of 'cards,' which contain either text or graphics. Areas of the cards are designated as 'buttons,' which, when clicked on with the mouse pointer, bring up further cards. In this way, a branching tree of cards is formed, which allows the information to be structured in a sensible way. This technique lends itself to many uses: referencing information, diagnostic systems, expert systems, and even teaching programs.

#442D: Clip Art #14: This disk contains 24 files of Animals in .IMG format for use as clip art. BAT, CAMEL, FOX, HIPPO, MONKEY, MOOSE, SCORPION, SEALS, TIGER, GOLDFISH, KANGAROO, OSTRICH, PHEASANT, SCALLOP, SKUNK, SNAIL, TURKEY_1, TURKEY_2, E_BASKT1, E_BUNNY2, E_BUNNY3, E_BUNNY4, E_BUNNY5

#443: Utility #42: DCOPY34, DCOPY and Shell program--great for formatting, copying, deARCing, etc. **DCSHW11L**--Replaces TOS show file routines. **LIST66**--a FORTRAN program that is used to list plain vanilla ASCII files to your system printer. Adds page breaks, header and page numbers. **DESKCHNG**--Tests the resolution you are booting into and changes the DESKTOP.INF file for whatever you want. **PRHP12**--a text file printing utility for use with HP Deskjet and Deskjet+ printers. It allows printing in many various modes in portrait or landscape orientation. **REORGHD2**--reorganizes hard drive or disk to arrange files in a more efficient manor. **STSENTRY**--Hard disk passwording program. **FLXIFAST** Manipulates executable program files so that they may be "fast loading" under TOS 1.4 and above. **Q_TEXT** is a shareware program that optimizes the text blit routines built in to the Atari Mega/ST.

#444: Utility #43: **GEMVELOP**--GEM Envelope printer for Atari Laser printer. **LB_FONT1**--5 more fonts for Atari's Laser Brain Epson Emulator (42nd_St, Applefnt, Boisefnt, Candy, Celtic). **CV2IMG11**--Update to Convert to .Img by Craig Daymon (shareware). Fixes bugs in previous version. Converts Neochrome, DEGAS, Tiny, Art Director, Doodle, Spectrum, and MacPaint files to IMG format. **HPDUMP**--HP printer driver for you ST's screen dump. (alt help). **ADDLABL2**-



-Ver 2.0 of A. Lima's Address Label printer and database program (medium and high res) allows you to print single labels from the keyboard, print a series of labels from a file, create (and append, edit, and delete) a file of labels and save for future printing. **MONSTER**--high res monitor emulator fools GEM into thinking that it is using a larger screen than it really has. In monochrome, the virtual screen size is 1280 x 960, identical to that of a Moniterm monitor. In medium resolution, the virtual screen size is 1280 x 480, and in low resolution, it is 640 x 480. In all resolutions, the virtual screen size is almost five times larger than the real screen. **PINHED15**- drastically reduces the time it takes to boot your computer, especially if you have several AUTO programs and desk accessories installed. Every program that runs after PinHead will load into the computer faster than you ever thought possible! And this speedup is not only evident at bootup time; programs will load much faster even when they are run from the GEM desktop or a shell such as CodeHead Software's HotWire. **TRIM_WP**--trims off the blanks and tabs from the end of each line of an ASCII file.

#445: Body Shop and Geography Tutor V2. BODY SHOP is a program designed to help students learn Human Anatomy as required in most Elementary or Junior High School science courses. The names and locations of all the major bones and organs of the body are taught using both common everyday terms and the more technical medical terms. **GEOGRAPHY TUTOR v2.0** (by ASDE Inc.) The shareware version of this program only provides the data base for Africa. Not only are there maps available, but there is also a full data base of useful facts concerning each country. There are 20 items of standard information from the United Nations office of statistics.

#446: PileUp V2.1: Pile Up is a clone of the Russian game of Tetris for the Atari ST. Version 2.1 Works on all machines, even those with TOS 1.4. (Note: replaces disk #390D which would NOT work on TOS 1.4 machines.) You must guide various blocks down the screen and try to fit them together as close as possible as they pile up. If you fit together a layer without leaving any spaces, then that layer will collapse. If you collapse enough layers, then you will advance to the next level. If the pile of blocks reaches the top, then the game is over. Shareware by Russell Moll.

#447: Blobbrun and Virtue. Blobbrun--You are now scanning the Teleport Menu, looking to see which button should be the first to be pressed, and to start your heroic effort of destroying the incredibly dangerous purple organism... Virtue--This game is an arcade and interaction type game. You will start out with the mission of rescuing the starbase #5 crew. You land on the base and find it empty. But be carful because the werf's are on the prowl.

#448D: Kepco Edit and Stevie. Kepco Edit provides powerful editing capabilities for software workstations. Features include: multiple file editing, UNIX regular expression parsing for search and replace, keyboard macros, reverse video cut and paste within or between files, most editing functions accessed through a single keystroke, large file handling, unlimited undo, and online help. **STEVIE** is an editor designed to mimic the interface of the UNIX editor 'vi'. The name (ST Editor for VI Enthusiasts) comes from the fact that the editor was first written for the Atari ST. NEW VERSION 3.95. Source code included.

#449: HagTerm Elite and MiniBBS. HagTerm Elige, V3.3 by Hagop Janoyan, is an advanced communications package designed and programmed by an experienced BBS user. Contains a very extensive 90+ command script language. **MINI_BBS.TEL** This little program was written to allow sysops or anyone wanting to have there computer be able to answer the modem when a call is received. The program will upon connection with a modem send the contents of a file called 'message.txt' over the modem to the person that called. This file can be any length you want. Just as long as you have the required disk space for it!

New Disks for APRIL

#430: ST WRITER ELITE, V3.8. Latest edition of this superb word processor. This disk contains the English, German, and Spanish versions as well as Magniwriter ST for the visiually handicapped. Full docs included.

Changes in the new edition: (Note: 3.2 and 3.3 had bugs in the Search/Replace which precluded null replacement. 3.4 sometimes would not load an AtariWriter file from another directory. This was fixed in 3.6) The Global Search and Replace is now roughly 60 times faster! The free memory byte counter can now accommodate values up to 95 Meg to be compatible with the TT which can handle more than 25 Meg of RAM. In non-GEM mode in many instances the Enter key acts the same as the Return key. The placement of the cursor with the mouse now updates the line/column numbers immediately (as opposed to updating them on the subsequent key stroke.) An info status line has been added on the GEM menu screen which keeps track of the name and path of the current file in memory. When you oversave a file which exists, you are warned, and the alert box tells you the name of the file which you are attempting to overwrite (nice, in case you click on the wrong file, or type in a name which you didn't know was already a file in the same directory). If you have TOS 1.4 in ROM, file selector boxes now indicate their function. (eg., did you select delete, load, save or what??). For users of the MEGA TOS (1.2) and the buggy disk-loaded version of TOS 1.4 (1988), previous versions required you to move the mouse pointer outside of the menu area at the top of the edit screen when pressing the [ESC] key to return to the menu screen. This was done to correct for a GEM bug which drops menus on the mouse, leaving holes in the menu like swiss cheese. No problem with the original version of soft-load TOS, 1.0, and 1.4 (1989). Now, the mouse automatically drops out of the area. All disk i.o. has been updated and thoroughly debugged. ^A, ^Z, CTRL Right Arrow, CTRL Left Arrow now work in command box. Improvements to the form input (from disk file) have been made, and bugs that caused screwy things on wrapping an insert word occurring at the end of a line have been squashed. You can now print only odd, only even, or all pages, so that printing double-sided text on your printer output is now possible. The .RSC file no longer is necessary, as the resource is now part of the program file itself. Support for Moniterm monitor. 160 columns by 57 lines, or 160 by 93 lines in hi-res flip-flop. (ver. 3.7). ver. 3.6 had a bug in the floppy format routine which appeared on TOS versions previous to TOS 1.2 (Mega TOS), and caused a fatal crash. Fixed in 3.7. The mouse cursor state is neutralized at exit further enhancing running of the program from a shell. ALL PREVIOUS VERSIONS TO 3.8 WILL NOT RUN PROPERLY ON THE STe COMPUTERS. THE TEXT AND BACKGROUND APPEAR THE SAME COLOR WHEN YOU PRESS ^T TO TRANSFORM COLORS. 3.8 works fine on the STe. As always, any bugs, let me know. Bruce Noonan, M.D., Compuserve [72407,504] or Genie [B.Noonan]

#431: KIDPUBLISHER PROFESSIONAL DEMO. (C) A desktop publishing program for young writers, Copyright 1989, 1990 by D.A. Brumleve, for Ages 5-11. The program provides a what-you-see-is-what-you-get text editor and a drawing program. Each drawing is linked to a page of text. When printed, each page has a drawing on the top half of the page with the text below it. The pages can be assembled into a booklet, if desired, and a title page without a drawing can also be printed. The program works well with most dot-matrix, jet, and laser printers. (Printing disabled in demo version.)

#432: CALAMUS FONTS #2. By Michael D. Hall. I have worked on these fonts, as have others, for many long hours. The Bodoni font is easy to read (at least that is my opinion, but then I also like classical music) and was not too difficult to build. I have copied the Drurylane font from Timeworks Publisher ST as I have graduated from that program to Calamus and needed it when I copied some of the documents done with Pub. ST into the Calamus format. The Hallbats font (ie. Zapf dingbats to you) is as complete as I could get it from the books I had at my disposal, it has over 65K and therefore took quite a while to finish.

#433: UTILITY #38. CHROME!, font similar to ITC Machine font. **DICTIONARY**, stand alone spell checker. **DISKLABEL V2**, simple 3 1/2" label printer. **FORMS**, fill out preprinted forms on your printer. **PS_35**, postscript/uscript screen fonts for use with Fleet Street Publisher. **PAPACNT**, paperless accountant, makes nice graphs and reports. **RLSGD-09** view multiple Neo/Degas pictures on one screen.

#434: UTILITY #39. VIEWGIF, allows your ST to show graphics created on a PC or Amiga, even if the original picture has more colors than the ST can show, and allows you to convert ST pics to GIF format for transfer to other computers. **INVERT**, Degas/Neo color pallet inverter. **DEPS**, desk accessory Degas Elite pixel switcher lets you change color value of a pixel in Degas pic. **CV2IMG98**, convert most pic types to IMG files. Includes maps for Lynx game Electro Cop in GIF format. **ALSIDE21**, professional quality slide viewer for Neo and Degas pics.

#435: UTILITY #40. BIORHYTHM, calculator as a desk accessory; **FASTLZHV2**, fast file compressor/uncompressor LZH format; **FLU**, virus simulator simulates most ST virus types; **TXTDUMPV2**, program and desk accessory text file printer with batch output; **RESISTOR**, resistor color coder/decoder with speech (low rez); **UNCLE** utilities, file cataloger and copier, Desk Acc clock, Desk Acc for showing free ram, MIDI color strobe.

#436: GAMES #26. (C) **FIGHTER**, space fighter shoot'em up; **FLIGHT**, simple shoot 'em up; **LUNACY II**, STOS game similar to Tetris,.not for TOS 1.4.

#437: SPACE ACE ANIMATION. (C) Terrific, colorful cartoon animation with sound. Only 15 seconds, but IBMs can't do this!

#438: GAMES #27: (M) **MINI GOLF**, put-put golf game from Germany. **PBM CHESS**, Play-by-modem chess game, now you can play chess against an opponent over your telephone (color or mono). **GILGALAD**, adventure game from Germany. **GNCIPHER**, cipher program, try and guess solutions.

#439: UTILITY #41: ACYPRY, deactivates/activates auto programs; **CANVAS**, Neodesk canvas allows you to change the background pic on the fly; **CLKSNK16**, Clock sync sets all internal clocks to the same time; **DCOPY32**, Ver 3.2 of Disk copy/format/arc/etc utility; **FASTLZH**, utility for unarcing LZH files; **INF_LOAD**, loads Neodesk file quickly; **LIST102**, 80-column file display; **RAMPLUS**, desktop formatter and full function copier and a ram disk and print spooler; **ST_UNZIP**, for pc ditto users, extract files faster than with PKUNZIP; **TEMPEL19**, machine language debugger and monitor; **UNLZH**, V1.61, program for extracting LZH archives; **UNTAR**, reads single files from floppy or series of floppies created using TAR backup prg; **UUX**, mail file decoder.

Order ST and/or Spectre PD and Shareware disks from:

CN ST Library
122 N. Johnson Rd
Sterling, VA 22170
(703) 450-4761

Disks are $4.00 each. Add $1/(6 disks) for shiping and handling up to a maximum of $6.00. Quantity discounts:

10 disks for $35
30 disks for $100
50 disks for $150

All CN disks are guaranteed. If you ever have a problem with a CN disk, just return it and we will gladly replace it. Note: we can now accept VISA and MC phone orders.

Note: Complete listing of CN Library can be found in the April, 1990 issue of Current

SPECTRE LIBRARY

These disks are for use with the Spectre Macintosh emulator for the Atari ST/Mega computers. Disks that are prefixed with an "M" will also work with the Magic Sac Macintosh emulator. (Disks prefixed with an "S" will not work with the Magic Sac.) All disks are in Spectre (or Magic) format. A "D" following a disk number indicates a double-sided disk. Disks are listed by category. NOTE: neither these disks nor the Magic Sac disks can be read by an ST in ST mode. You must be using the Magic Sac or the Spectre to read these disks. Note also that you need a Mac System/Finder disk to use any of the Magic or Spectre disks.

CLIP ART

#M33: Clip Art #1---AirCraft, Business, Car Logos, Cars & Trucks, Clip Art Demo, Disney, Eyeballs, Flowers, Misc, Seasons, Trees1, Trees2, ViewPaint 1.5.

#M52: Clip Art #2---Al&Jimmy, Americana, Arrows, Bigger Guys, Billboards, Borders, Cars, Cartoons, Cats, Celebrities, Egret, Famous People, Farm Animals, Good Guys, Gorilla, Hopefuls, Little Guys, MacLectic Clip Art, More Little Guys, Presidents, Rain/Chef, Skier/Football, Skylines, Space/Race, Statues, Tennis/Running, Wine & Beer.

#M55: Clip Art #3--Animals, arrows, books, business, calendar, computer, disk, files, geography, holiday, houses, icons1-6, mail, memo, misc1, misc2, money, music, office, people and symbols.

#S53D: Clip Art #1---12 pages of encapsulated postscript clip art in Pagemaker 3.0 format (requires Pagemaker 3.0 or later and Ultrascript).

#S58D: Clip Art #2---66 pieces of scanned image clip art.

#S64D: Postscript Clip Art #1---26 EPS clip art files for use with UltraScript.

DEMO DISKS

#M37: Mac-A-Mug Pro Demo V1.0--Create your own mug shots by combining a variety of different facial features.

#M38: Video Works Player #1---PD player for VW animated screens w/11 movies.

#M39: Demo Disk #2---Anatomiser, DeskPaint, and SuperPaint.

#M54: Design--No save feature. Includes 5 samples and full documentation.

#M59D: Demo Disk #3---Demo version of Kaleidagraph and Geographics II.

#M62: Demo Disk #4---Math Blaster and Blob Manager Demo.

#S01: MacWrite 5.0 Demo---(Cannot print/save but can load and read doc files.)

#S02: MacPaint 2.0 Demo---(Cannot print/save files but can load, view & create them.)

#S04D: Aldus Freehand Demo---A Videoworks II interactive demonstration of Freehand drawing program.

#S06D: Powerpoint Demo---(64K ROMs Compatible) Fully working demo version of this popular Mac program for planning, composing, and creating complete presentations.

#S08: Image Studio Demo---(Does not save) A photo retouching lab, modify digitized images in 65 grey scale levels.

#S12D: Full Impact Demo---Great spreadsheet program. (No save feature.)

#S20D: MacDraw II Demo---VideoWorks format provides tour of latest features.

#S25D: MacMoney Demo---Personal finance program, prints but does not save.

#S28: Database Builder Demo---Fully working demo version of DAtabase Builder, a full-featured database (including graphics) all in a Desk Accessory.

#S62D: PipeDream Demo---fully working version of PipeDream game, 1 or 2 players play 3 different levels of game.

#S71D: Shanghai Demo---fully working demo version of Shanghai 2.0 complete with sound.

DESK ACCESSORIES

#M8: DAs #1---3DTTT Game, Art Thief, Ascii, Bagels Game, Big Ben, Calculator, CopyFile, DA Tester 1.5, Delete File, Desk Acc Tester, DeskZap 1.2, Eject&Reset, Extras, File Hacker DA, File Tools, Font Grapper+, Font Grapper3, Hex Calculator, HP 12c, MemScan, MemWindow, MerriMac BlackJack, miniWriter, MockTerminal, MockWrite, Moire, MW Count, Other 3.0, Puzzle, Reader, Rubik's Cube, Sampler, Scrapbook, Scientific Calculator, SetFile 3.3, SkipFinder, TheBox, Tiler 1.5, Trails, Transfer, TrapList, Utils, Word Count, Zoom Idle.

#M18: DAs #2---Alarm clock, Art Grapper+, Calculator+, Choose Scrapbook+, DA File, Disk Labeler, DiskInfo 1.45+ SICNs, Explorer, Gone Fishin', Hex Calc, Label Maker, MemWindow, MiniWRITER 1.34, Multi-Scrapbook, MW 4.5 Counter.DA, Popup 1.0, ProCount, ReadiPrinter, Ruler, SFstartup 1.0, Skipfinder 6.1, Sleep, Stars 1.6, Stars II, Sysfonts, TeaTime, Timer.

#M46: DAs #3---3D Tic-Tac-Toe, A-Bus ID Poker, Abacus, Calendar, Cheap Paint, Collapse, ConCode, Crabs2, DAFile, DAFont, Disp.Msg, Double Apple, Executive Decision, FatMouse, FixPic2.0, Flow, Fun House, Func Keys, Font, Idle, KeyMouse, KnockOut, Multi-Scrap, MW to Text, New MiniDos, Orig Clock, PaintDA, Poker, ProCount, Ruler, Tiler1.5, Timelogger2.11, Utilities, Wrap, WXModem, Sample It.

#S16: DAsS #1---NekoDA, BezierDa and Docs, SnapShotDA 1.2, Adventure, VirusDetective, BreakKey, SysErrTableDA, PinUp Clock DA, Freemem, New Scrapbook DA

#S31: DAs #2---Address Book 1.1.2 w/ docs, Artist+ 2.01 w/docs, BlackJack, Calc 3.0, Calendar 1.7, Catch, dCAD 3.0 w/docs, Diskinfo 1.2, Maxwell 2.2a, MegaCalculator, SuperHelp w/docs, VirusDetective 2.2.1 w/ docs, and windows.

FONTS

#M13: Fonts #1---Akashi, AlgBlurb, Algebra, Athens, Boxie, Dover, Geneva, Hood River, ImageWriter, LED, London, Los Angeles, Luxor, Mars, Monaco, Park Ave, Pica, Ravenna, Rome, Runes, San Francisco, Seattle, Steel Brush, Ultra Bodoni.

#M14: Fonts #2---Bookman, Courier, Coventry, Dali, Genevaa, Hebrew, Manteco, Shadow Box, Sri Lanka, Times, Walla Walla, and font display 4.6 w/docs.

#M16: Fonts #3---Alice, Avante Garde, Berkeley, Broadway, Camelot, Cartoon, Centura, Chancery, Eon, Exeter, Fallingwater, Fantaste Key, Fantaste!, Future, Ham, Helvitica, Hollywood, Lachine, Lineal, Madrid, Pittsburg, San Quentin, Silicon Valley, Stencil, Unicol plus DAFont2.da and SysFonts.da.

#M32: Fonts #4---Canberra, Chicago, Humanistic, Music, New Dali, Palencia Application, Palo Alto, Pioneer Shadow plus F/DA sorter and Font Tester.

#M35: Fonts #5---Beehive, Beverly Hills, Boise, Chicago, Courier, DeStijl, Ham, Happy Canyon, Helvitica, Mod. Chicago, Old English, Square Serrif, Sri Lanka, Worksheet.

#M42: Fonts #6---Berlin, Boston II, Courier, Dorza, Highwood, MicroBoston, MiniBoston, New York, Palo Alto, Sparta, Stiletto, Symbol, Tatooine, Venice, Wartburg.

#M44: Fonts #7---42nd Street, Aldous, Art Deco, Ascii, Blockbuster, Border, Clairvaux, Coptic, Deep Box, Ivy League, Klingon, Las Vagas, Little Box, Madrid, Memphis, Minneapolis, Rivendell, Spokane.

#M50: Fonts #8---Alderney, Cairo, Cyrillic, Greek, Paint, Playbill, Rehovot, Runes, Washington, Zodiac.

#M61: Fonts #9---New Century, Helvetica, Columbia, Minneapolis, Creamy, Palatino, Detroit, and Zap Chancery.

#M64: Fonts #10---York, Paint, Miscpix, Icon, Cupertino, Arabic, Fallingwater, Schematic, Moscow, and Isengard.

#M67: Fonts #11---Cavanough, Icon2, Fletcher, Math-Greek, Toyland, Troyes, Memphis, Provo, Scan, Tombstone, Southbend, Klingon, Wall Street.

#S51D: PostScript Fonts #1---11 postscript fonts: Archimedes Border, Bills' Dingbats, Classic Heavy, Classic Italic, Classic Roman, Draftman, Faust, Gordon, Style, Tiny Helvetica, and Toulouse Lautrec.

#S52: PostScript Fonts #2---BarCode39, Cunei, GE Laser, NModern Print Bold, Thomas, Tiffany Sample.

GAME DISKS

#S05: Games #1---Banzai, Monopoly 4.0, ATC 4.0, Mines, New Daleks, Brickles 4.0

#S07: Games #2---Space Bubbles, Stratego, Investigator #1, Towers of Hanoi, Marienbad.

#S15: Games #3---Darts, MacCamelot, BricklesPlus, Gravitation 4.0, Swamplord

#S22: Sword of Siegfried---Graphics/text adventure (requires v1.9 of Spectre).

#S24: Games #4---Dragon 2, Zoony, MazerLazer, and demo of ShufflePuck.

#S27: Games #5---3D Checkers V2.0, Ballistics 2.0, Consternation 1.0, HangMan, Peg Puzzle Pak, UnBreakout.

#S38: Games #6---fully working versions of Cairo Shootout 1.2a, Puzzl 1.1, and Stunt Copter 2.0. These programs were placed in the public domain in memory of their author.

#S46: Everyman 1---A Graphics/text adventure created with WorldBuilder. Requires V1.9 or higher of Spectre.

#S47D/S48D: Phoenix---interactive adventure game based on the movies 2001 and 2010. Requires both disks. Your job is to map previously explored galaxies, but you accidently find the starship, Discovery. It never was destroyed. You must somehow get Discovery back to hearth using HAL. HAL responds to your commands with digitized voice sounds from both movies. Requires Spectre V1.9 or higher and 2 DS drives or Hard disk.

#S49: Lawn Zapper---arcade type game. The object of the game is to mow a lawn while avoiding hazards. This game has digitized sound and is quite addictive. (Requires V1.9 or higher of Spectre.)

#S50: Dungeons of Doom, V5.4---Interactive adventure game based on Dungeons and Dragons.

#S54: Games #7---Beast 1.0, MacBandit 1.2, MacNinja 1.0, Rock Paper Scissors.

#S66: Games #8---Hedges, MacYahtzee, MacMaze, Montana, Pentominoes, and Star Patrol.

#S68: Games #9---Pits & Stones, StarRoids 5.4.1, Stellar Imperium 1.01, and Dragon V2.1.

GRAPHICS

#M10: Graphics #1---Amy, Artisto, Ball demo, Big Ben, Brooke, Bugs, Curves, Display Message, Dragon, Fighting 51, Fourth Dimension, GARF, HotSex!, Liar's Club, Living Art, Max Headroom, Moire 3.0, Nightmare, Optical Illusion, Paint Grabber, Painter's Helper #1, Pattern, Pisces, Rotations, Saddle, The Fourth Docs, ViewPaint 1.5.

#M12: MacBillBoard---Chipmunks, Donald & Daisy, Goofy At Bat, Announcement, Babe Ruth, Carrotprint, Classic illusions, Escher, Escher Hands, MacBillBoard, Max, Mickey and Minney, Quick Tour, T-Shirt.

#M22: Graphics #2---BlowUp 3.0, BlowUp Notes, Calendar Maker 2.2.1, Dynamo, Graphic, Mad Menus, Math21, Rays, Simutree, Spiro, Tree, Vanlandingham.

#M26: Graphics #3---3D Sketch, AniRama, Bin/Graphics, Brownian Motion, Control, Fractal Contours, Fractals, Icon Collector, Julia, Make Paint, Melting Clock, Small View, Shape Art, Star Flight, Window Demo.

#M47: Graphics #4---Cursor Designer, Earthplot3, Graphics2, Mondrian1, MotionMaker2, Moving Finger, Wallpaper, Zoomation.

#M57: Graphics #5---Micro Film Rdr1.4, Bomber, Iliana II, Preview, Super Ruler 1.1, and XVT-Draw.

#S18: Graphics #1---1Dmata, DAfx 1.32, 3dEDIT, Fly Saver, Kaleidoscope, Optical, Pattern Blocks, Rae, Turbo View 1.01, MacPaint Shortcuts, Desktop Shortcuts.

#S45: Graphics #2---11 graphics oriented files and documentation: MandelZot 1.4.1, Micro Swarm, Notebook 1.0, NoteNote5, PyreWorks, ScanPaint, SelectPaint, ViewPaint 1.7.

HYPERCARD DISKS

#M48D: HyperStacks #1--Address, Databook, Fractal, Funy Day, Home Desk, HyperNews1.2, HyperZoetropes, MacGallery, MacVermont #2, Notebook, Periodic Table, and ResEdit IPS.

#M49D: HyperStacks #2--Ear, Illusions, Passing Notes, Shipstack, Silly, and US States V2.

#M56D: HyperStacks #3--Atkinson's 786K Clip Art Stack (500 clip art pics).

#S10D: HyperStacks #1---Concentration, Hyper-Gunshy, Dinosaurs, AutoStack, Home 1.2.

#S13D: HyperStacks #2---VisualStack, Chem Flash Cards, DisplayPict 1.4, Indigo Gets Out, AutCat, Animal Stack, Comic, OnTheBeach, Name That Plane.

#S35D: HyperStacks #3---5 stacks for use with HyperCard of SuperCard: Atoms, Bird Stack II, Helicopter Stack, HyperIRA, Scan Stack 3.

#S37D: HyperStacks #4---StackArt Vol. 1 (100 clip art pics).

#S56D: HyperStacks #4---a single 771K HyperCard Stack, entitled Bird Anatomy 1.2d, covers the basic anatomy of birds, flight, feathers, head, wings, ecology and more.

#S61D: HyperStacks #5---Clip Art Sack 3, Crypo-Slate 1.6, Little Black Book, Peridic Table 1.0, Quick Compactor 2.0, SetVersion XCMD 1.0.

#S65D: HyperStacks #6---Calendar, Dot to Dot 2, HyperPaint, Project Planner, Script Searcher, The Aging Process, and World.

#S70D: HyperStacks #7---Astronomy, Clip Art Stack 2, Crazy Icons, Famous People Clip Art, Icon Transfer Stack, Memory Information, New ResCopy XCMD, Self-Modifying Stack.

HYPER UTILITIES

#S19D: Hyper Utility #1---Deprotect Stack, XPICT, Moving Cursors Tutorial, Button Manager, Stack Compacter, Field Line Numberer, CardMover, Six Little Goodies, MH PowerScripts Sample, ShowDialog1.5.

#S33D: HyperUtility #2---13 utilities for use with HypoerCard: GetString XFCN, HyperScrap, LockField, PluckString XFCN, Recover, Script Lister, Script Access, Stack Analyzer, Stak-X Demo, Unity, Virus Encyclopedia, XFCN miscellany, Zoomer XCFN).

#S40D: HyperUtility #3---four stacks for use with HyperCard: Christopher's XSTAK4, How a Virus Works, IConjurer, and Progress XCMD 1.1.

PRODUCTIVITY

#S34: Excel Templates #1---29 assorted files for use with Excel: Macro, Amort, Sch, Apod 1.0, Budget, Checkbook, Clock.CH, Clock.MS, Clock.WS, Commands, DB.Form, Excel Budget, Expenses, Exps, Inc, IRA, Load Calc Master2, Load MaxTime 2, Matrix, MortAmt.MS 3.0, Replace, Savings Account, BioChart, BioRhythm.

#S41: Productivity #1---five personal productivity packages: Album Tracker 2.0.1, Amortize 2.4, Check Book 2.0, Road Atlas, and Smallview 1.3.

#S42: Productivity #2---Address List 1.5.2, BiPlane 1.0.1 (spreadsheet), Doctor 2.35 (makes self launching documents), and Mac Mailing 1.4S (a mail list program).

SOUNDS

#S17: Sounds #1---SoundMaster w/22 sound files for use w/V1.9 of Spectre.

#S23: Sounds #2---Sound files may also be used w/SoundMaster on #S17. (10000 Marbles, Any Sound 1, Any Sound 2, Bad Disk 1, BVad Disk 2, Beep, Beep Sound 1, Disk Sounds 1-4, Don't Worry Be Happy, Ka-Chung!, Rolling Your Own, Type Key 1, Type Return 1, Type Space 1.)

#S29: Sounds #3---Talking Moose 1.21 and 9 sound resources for MacCD (#S23) or SoundMaster (#S17)---Archie, Bad Disk 3, Beep Sound 2, Disk Sound 5, Disk Sound 6, Key Click 1, Oh Yeaaahh!, Mac Sound 1, and Startup Sound 1.

#S32: VideoWorks w/Sound---6 VideoWorks animations w/player, sound resources, and MacinTalk (1 Mac to go, Apollo, Marbles, People Wall, ShortStop, and The Cauldron.)

#S36: Sounds #4---contains assorted sounds for use with SoundMaster (CN #S17) and a file that will change the system beep to other kinds of sounds. Includes A Wish, I don't know, I know you are, Mecca jumbi, Need Input!, Unacceptable, Ax Headroom, CheapBeep, Ayaaaah!, Boom!, aooooh, game over man, monkey, and vulcan mind.

#S43: VideoWorks w/Sound #2---7 more VideoWorks animation files that include sound. Disk also includes VideoWorks player and Macintalk to produce the sound. Hello Amiga, MacPaint Vid, Movies 3, My1stVid, Trash, Vamp NY 1, and China Doll. Requires V1.0 or higher of Spectre.

#S59: Sounds #5---Beam Up, Dog Do, Life Sentences, Mr. Ed, Soundmaster 1.3.1, SuperPlay 4.0, Zippy 2.0, MacinTalk.

#S60D: PostScript Fonts #3---Calligraphic Sample, Chester, Deuse, Louisville, Rodchenko.

#S69: Sounds #6---SoundMaster V1.4 with 16 nes digitized sounds: (Bad Disk4, Disk Request, Flush, Foom, Intellivoice, Lots of Input!, Mac II Beep, Moof, Ooh, Input!, Orgasm, Sorry Dave, SpamSound, That's All Folks!, Type Key 2, and Zoom Open.

TELECOM DISKS

#M28: Red Ryder 7.0--Red Ryder 7.0, Red's 7.0 Stuff, RR 7.0 Macros, RR Docs.

#S03D: Red Ryder 9.4---Powerful telecommunications program. Docs, utilities included.

#S09: Telecom #1---StuffIt 1.51, StuffIt Users Guide, Freeterm 2.0, Freeterm 2.0 Doc, TermWorks 1.3, Packet III v1.3.

UTILITIES

#M3: Utilities #1---DES, Font Doubler, MacDump, MiniFinder, PackIt III (V1.3), Reverse Screen 1.0b1, RMover, Scan, Set File, Slicer. Version Reader 1.1, Write Stream.

#M5: Disk Librarian---Disk Librarian V1.82A. Includes listing of CN Magic/Spectre Library.

#M9: Utilities #2---Bind Icons, Change Appl. Font, Convert Desk Acc, Desk Acc Mover, File Hacker, Font Doubler, Index, Make Screen, MicroFinder, Purge Icons, RamAStart 1.3, REdit, ResEd, Select Paint, Show Version, User Interface Demo.

#M11: Print Utilities---Coventry12, Disk Labeler, Fast Eddie, Font Mover, Ink, MacWrite 4.5 to Text, miniWriter, MockWrite, Pica10, ReadMacWrite, Walla Walla9.

#M27: Utilities #3---Browse/Shazam!, Clocks: analog & digital, Edit, FEdit 3.0, launch, lazymenu, Magic Beep 1.0, Menu Ed, microFinder, Quick Dir, Quick Print, RamStart2.0+, Road Atlas, ShrinkToFit, SicnEdit, SortMenu, SuperFinder4.0, TabsOut, Unpit, Way Station.

#M43: Utilities #4---DiskDup+, MacSnoop 1.03, RamDisk+ 1.4, ResTools 2.01, Oasis 2.01, Font Librarian, Switch.

#S11: Utility #1---MacEnvy, Benchmark, DiskTimer II, SampleIt 1.21, SampleIt Docs, Apfont 3.2, HierDA, Fever, OnCue 1.3 DEmo, ScreenDump II, Findsweel 2.0 Demo

#S14: Utility #2---Big Das runner, Mac II Icons, DiskParam, Utilities 1.5.1 Guide, Unstuffit DA 1.5.1, Auto Unstuffit Installer 1.5, Repair 1.2, ICON Designer, Viewer 1.5.1, SuperClock 3.1, SuperClock Doc ToMultiFinder, Interferon 3.1.

#S21: Utility #3---File Scan, Jaws Icon, File Master Icon, File Monster Doc, SnapShot Installer, Black Hole 6.0.2, Looney Tunes Icons, Dog Trash Icon, Shredder Icno, UDS/M1.1, Virus RX 1.4a2, System Font. Some icon files require ResEdit for installation.

#S26: Fkeys #1---23 fkeys and fkey related applications (Analog Clock, Clock, CopyDisk 3.0, Craps, F-KEY Installer, FadeKey, FileInfo, fkey, Fkey File Installer, Fkey-DA Sampler 2, FkeyView 2.5, FullMoon Calender, InfoKey, LaunchKey, MacAlmanac, Pipeline, ResCViewer 4.5, SafeLaunch 2.2, SpaceWarp, StripTease, Unpack, Ver Reader 3.0 and Windows.

#S30: Utility #4---Init Cdev, Assassin, BundAid, Curse the Finder, Easy Icon, Finder Cursor Icons, Finder Icons, HD Mini-Icon, IconManager 1.1, JerryCan, Murphy Init, NeVR Init, ScrollMBar CDev, System Icons+, Version Sleuth 1.0, What, and Windows.

#S39: Utility #5---Init Cdev 2.0, About IOnit Cdev 2.0, Moire Cdev, Moire Screen Saver Docs, Moire Cdev to Init, Hierda .9983, RAM check, SnapJot, SuperClock 3.4, Timepiece, Virus Detective 3.0.1, Wind Chooser 1.0.1, Why 1.0.1, and a fully working, but limited demo version of QuicKeys.

#S44: Utility #6---Black Box 1.5, Com plete Delete, Earth Init, FFDA Sampler, File Fixer, IconWrap Init, Macify 2.5, MacSpeed, Repair 1.4, Rescue, Scrolling Menu Installer, Shredder 6.0, SystemVersion, TextDiff, TFinder 2.2, ToMultifinder 2.3, Vaccine 1.01, and Version Reader 2.2.

#S55: Utility #7---9 of the latest and best utilities: Boomerang 2.0 2/docs, SuperClock 3.8 w/docs, FreshStart INIT, Kick the Can, Layout 1.9, MacEnvy 2.0, Timepiece INIT, WatchInit 5.0, WindChooser 1.12 CDEV.

#S57: Utility #8:---Complete Undelete demo, Disinvectant 1.6, FunKey, Speedometer 2.51, SysErrTable DA 2.5.

#S63: Utility #9---CDEVs and INITs. Alias, AltCDEF 1.2 w/docs, AltWDEF 1.4.4 and 1.5.3 w/docs, Following w/docs, MacEnvy 2.1, RAMDisk 1.1, and WindowShade.

See page 73 for pricing and ordering information.

#S67: Utility #10---NeXT Folders, Fish! V2.0, Scroll2 2.0, The Fabulous Text Sucking Leech, and Cursor ANimator 1.0.

Magic Game Disks

(These game disks all work with the Magic Sac and may very well work with the Spectre, but they have not each been tested to verify that they work with the Spectre.)

#M4: Games #1---Backgammon, Bash Big Blue, Curves, MacLuff, MacYahtezee, Maze 3D, Meltdown, Missile Command, Munch, PepsiCas, Smile, Snow, Solitaire, Space Bubbles, Vax Runner II.

#M6: Games #2---Ashes, Black Box, Destroyer, HexPuzzle, Killer Kalah, MacPoly Demo, Office Attack, Point Symmetry, Snake, Solitaire, Trophy List, Wall Game, Wheel.

#M7: Games #3--Ashes, Break the Bricks, Deep Ennui, Go, Mac Gunner, MacBugs, MacCommand, MacYahtzee, Wiz Fire 1.1

#M15: Games #4--Alice, Amps, Bricks, Canfield 2.0, Iago, Lets Get Tanked!, MacHeads, Nim, Space Attack, 3rd Dim.

#M20: Games #5--Chase'Em, Crystal Raider, Daleks, Golf MacWay, Kill File, Kill, King, King MacWrite, On-The-Contrary, StuntCopter1.2.

#M21: Games #6--Guess, Hacker's Contest, Hot Air Balloon, Match, Ramm, Third Dimension, Trick-Track, Utaan Attack, Zero Gravity.

#M25: Games #7--Billiards, Cross Master Demo, Flash Cards, Hangman-9.0, MacLuff, Master Guess, Safari 1.0, Venn.

#M30: Games #8--Bowl-A-Rama, Mac-Trek 1.1, Mystery Box 1.0, Shots, Star Trek Trivia Quiz, Window Blaster 1.0.

#M34: Games #9--1,000 Miles, Asteroids, Cairo ShootOut!, Donkey Doo, Duck Hunt, Pente 1.0.

#M45: Games #10--Blackjack4.0, Gunshy 1.0, Humpback, New Social Climber, Panic, Puzzle 1.0, Star Trek Trivia Quiz, VideoPoker.

#M51: Games #11--Bouncing Balls, Fire Zone, Mac Word Hunt 2.0, Out Flank, Risk and Word Search.

#M53: Games #12--3D Checkers 2.0, Bills Casino, BMX-The Racing Game, HeloMath, Mouse Craps.

#M58: Games #13--Klondike 3.6, Space Station Pheta, Mac Concentration, Sitting Duck, Hot Air Balloon 2.1, Think Ahead+2.0.

#M60: Games #14--Golf Solitaire, Mac Football, Euchre 2.2, Gomoku, Pyramid, Checkers, Runaround and Macpuzzle 1.0.

#M19: PCS Games #1--Apple, Black Hole, Face, KalinBall, Madonna, Minute-Mag, Patchwork Mess, Phantom, Pure-Gemme, Samurai, The Royal Pain, Wizards Lair.

#M29: PCS Games #2--Circus Circus, D&D, Diadora, Max, Merlin, Modern Mistress, Queston, Royal Pain, Twilight Zone, Whazit.

NOVATARI XL/XE PD Library!

In response to many concerns voiced by our customers, we have decided to revamp our XL/XE selection of library disks. After considering many of the options available to us, we have decided to start a new XL/XE library containing all new titles and a few old ones all put together in a new, consistent format. This format means that the disks will be easier to use and will contain more quality software.

Due to the amount of work involved in releasing fifty new disk titles, the new disks will be appearing at a rate of hopefully five or six a month. The old library will still be available and a list may be obtained from the Mail Order Librarian.

To prevent confusion between the old and the new libraries please use the new three letter and number code to identify orders from the new library.

Attention all programmers! NOVATARI is always seeking contributions to its library. If you've written something you think others would enjoy using or you have something we don't, by all means, send it in. Please remember that all submissions should be public domain or shareware. Disks accepted into the library will be exchanged for library disks on a one-for-one basis. Please indicate your choices when you send in your submissions. Please send your submissions to:

Jeff King
10033 Clearfield Ave.
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APP1 – Textpro 4.0 (Latest text editor for the Atari. Works with Mydos 4.50)

Demo Disks

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DMO4 – German Sound and Graphics (An excellent art and music demo.)

Disk Operating System

DOS1 – DOS 2.5 (An old DOS standby.)
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DOS4 – DOS 4.0 (Never officially released by Atari.)
DOS5 – DOS 2.6 (Similar to DOS 2.5)
DOS6 – MachDos 3.7a (An Atari DOS alternative.)
DOS7 – Mydos 4.50 (One of the best Atari DOS substitutes.)
DOS8 – DOS XE (The DOS released by Atari to provide support for the XF551 drive.)

Game Disks

GAM1 – Text Adventures (Secret Agent, Survival, Kidnapped, Adventure in the Fifth Dimension)
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GRA5 – GIF Pictures (Several pictures for use with the GIF Viewer above.)
GRA6 – DRAW 7 (130XE Required. Excellent drawing program that includes animation capability.)

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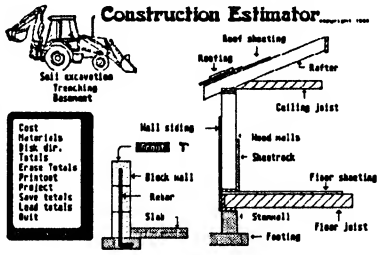

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